FINAL

ENVIRONMENTAL ASSESSMENT

FOR THE DEMOLITION, CONSTRUCTION, OPERATION, AND MAINTENANCE OF NEW BOAT DOCKS, BOAT RAMP, AND SUPPORT FACILITY

AT

CAPE CANAVERAL AIR FORCE STATION, FLORIDA

Version 1.3

August 2006

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FINDING OF NO SIGNIFICANT IMPACT (FONSI)
AND FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)

DEMOLITION, CONSTRUCTION, OPERATION AND MAINTENANCE OF NEW BOAT DOCK AND BOAT RAMP

AT

CAPE CANAVERAL AIR FORCE STATION (CCAFS) FL

August 2006

Pursuant to the Council on Environmental Quality (CEQ) regulations, the provisions of the *National Environmental Policy Act of 1969* (40 CFR Parts 1500-1508), and *Environmental Impact Analysis Process* (32 CFR Part 989), the United States Air Force (AF) conducted an assessment of the potential environmental consequences of the Proposed Action to construct new boat dock and concrete shelter building just outside the Trident Basin and replacement of the existing boat dock in addition to construction of a boat ramp inside the Trident Basin, located on CCAFS and associated security access road and shelter. The EA is attached and incorporated by reference. The only viable alternative considered to the Proposed Action was the No Action Alternative, in which the existing security boat dock structures would continue to be used at CCAFS.

No significant environmental impacts were identified that would require the completion of an Environmental Impact Statement. However, some less than significant impacts were identified and are summarized below.

Air Quality: Short-term impacts associated with construction-related emissions would be expected. Most construction-related emissions are exempt from regulatory review provided that National Ambient Air Quality Standards (NAAQS) would not be exceeded. Except for dust, emission of criteria pollutants by project-related vehicles and equipment during the construction period would be minor. During installation, ground surface disturbance would occur. Dust suppression techniques would be used as necessary to mitigate wind and water erosion and reduce airborne emissions.

Biological Resources: No Federal-listed Threatened and Endangered (T&E) plant species have been identified at CCAFS. Protected T&E sea turtles have historically nested in the beach areas to the east and have been sighted in the Trident Basin. An increase in the number of boats in the basin would occur due to use of the new docks. However, impacts to turtles would be reduced by observing no wake zones. Furthermore, boat operators would look for turtles prior to docking, using the boat ramp, or performing any other activities that would impact sea turtles. Impacts to nesting sea turtles on adjacent beaches will be negligible since the only additional lighting proposed for the project would be two Low Pressure Sodium fixtures on the concrete shelter.

The federally listed West Indian Manatee is known to utilize the waters of the Trident Basin. To prevent impacts to manatees, protection measures identified for sea turtles in the water would be followed for manatees, as well.

The federally listed Eastern indigo snake and southeastern beach mouse have the potential to be present in the area where the shelter will and access road will be built; however, although neither species has ever been observed in the area. Adverse impacts to indigos are not expected since the area consists of mowed grass only. To ensure potential impacts are reduced, the 45 SW Indigo Snake/Protection Plan will be presented to project personnel and education signs will be posted at the site. Any indigos encountered during project activities will

be allowed to safely leave the area on their own. Impacts to beach mice are expected to be negligible since no burrows are currently at the site.

Consultation with both the National Marine Fisheries and U.S. Fish and Wildlife Service has been completed and both agencies concurred that the proposed action is not likely to adversely impact federally listed species under their purview.

In the Proposed Action area, rock outcrops and the gravel revetment provide habitat for macroalgae and invertebrate grazers that provide foraging for juvenile turtles and fish. However, the remaining areas are clear of any coral, coral reef, live/hard bottom or artificial reef habitat. Generally, any bottom communities are of low diversity and sparse due to the dynamic nature of the location. Consultation with National Marine Fisheries has been completed.

Cultural Resources: Existing surveys do not indicate the presence of cultural resources in the Proposed Action areas on CCAFS. Based on their past use, it is unlikely that intact cultural resources would be present in these areas.

Geology and Soils: Land disturbance activities have the potential to accelerate erosion. Erosion and sediment control measures would be designed and implemented to retain sediment on-site and prevent violations of State and Federal water quality standards. Any erosion or shoaling that could cause adverse impacts to water resources would be mitigated using Best Management Practices (BMPs).

Water Resources: Potential, temporary impacts are expected including turbidity to surface water (i.e., Trident Basin). To minimize turbidity during jetting/augering for piling burial, a sediment boom would be used. Erosion control during construction activities would be undertaken with the use of BMPs designed and implemented to retain sediment on-site and prevent violations of State and Federal water quality standards. Accidental spills into these surface waters have the potential to impact sea turtles and manatees, both Federally protected species. To date, spills in these locations have consisted of relatively minor petroleum waste and product releases resulting in minimal environmental damage. No known mortality of endangered species has occurred due to spills. Spill response teams available through the U.S. Coast Guard, the Joint Base Operation Support Contractor and commercial sources located at Port Canaveral are capable of cleaning up most potential spill incidents at CCAFS wharf facilities.

Hazardous Materials and Wastes: Hazardous materials and waste that may be encountered during demolition activities includes fuel and possible asbestos-containing materials (ACMs). These materials would be properly disposed in coordination with the AF.

Health and Safety: Various health and safety hazards associated with heavy equipment operation and conventional demolition would exist. All appropriate regulations would be followed during project activities, along with AF and 45 SW specific guidance. The structure under consideration for demolition is suspected of having ACMs. ACMs would be removed and disposed of in coordination with the AF.

Infrastructure and Transportation: A new road would be constructed at CCAFS for access to the new boat dock and the proposed concrete storage building. The road would be located on the spoil berms on the outside and to the south of the Trident Turning Basin.

All materials, equipment and metals identified as potentially salvageable would be staged for possible recycling or reuse during demolition activities. The purchase of construction materials containing recycled materials would also be maximized.

Land Use and Zoning: It is a requirement that federal activities be consistent with the enforceable policies of a coastal State's federally approved Coastal Management Program. The

45 SW has initiated consultation on Coastal Zone Management Act consistency and anticipates concurrence for the Proposed Action activities.

Noise: Demolition and construction activities would generate noise, which although not continuous, could be disruptive for brief periods to wildlife and individuals in the immediate area. When employees are subjected to excessive noise, feasible administrative or engineering controls would be utilized. If such controls do not reduce sound to acceptable levels, hearing protection would be provided and used to reduce noise impacts.

Socioeconomics: Socioeconomics comprise such interrelated resources as population, employment, income, temporary living quarters (during construction activities) and public finance. It is not anticipated that the Proposed Action will affect employment patterns on a permanent basis or induce substantial growth or growth-related impacts. No increase in population levels would result.

No Action Alternative: The current utilization of the small dock in the Trident Basin would continue to be exercised by AF and Navy security. No new facilities would be constructed. The dock located in the Trident Basin is not large enough for adequate staging of water crafts; injuries have occurred due to the over crowded conditions.

Cumulative Impacts: Cumulative impacts were considered for the Proposed Action and the No Action Alternative. Several other demolition/construction projects have been planned, such as the demolition of Space Launch Complexes 36 and 40 on CCAFS. Cumulative contributions non-recyclable construction debris to the Brevard County landfill would occur. These cumulative impacts are not anticipated to significantly impact human health or the environment.

No cumulative impacts are anticipated from the projected increase in water craft in Port waters. Currently boats are "doubled up" at the existing dock, creating a safety concern. The new dock will eliminate this safety hazard. Additional safety precautions including slower boat speeds, awareness and education will decrease the risks associated with any increase in the number of water crafts.

Finding of No Practicable Alternative for Activities in Floodplains

Section 1 of Executive Order (EO) 11988, *Floodplain Management*, directs each federal agency to provide leadership and take action to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for federally undertaken construction and improvement projects. If it is determined that the only practicable alternative consistent with the law and with the policy set forth in this EO requires siting in a floodplain, the agency is required to design or modify its action in order to minimize potential harm to or within the floodplain, consistent with regulations issued in accordance with Section 2(d) of this EO and prepare and circulate a notice containing an explanation of why the action is proposed to be located in the floodplain, prior to taking the action. If, after compliance with the requirements of this EO, new construction of structures or facilities are to be located in a floodplain, flood-proofing and other flood protection measures shall be applied to new construction or rehabilitation. To achieve flood protection, agencies shall, wherever practicable, elevate structures above the base flood level rather than filling in land.

Section 1 of, Executive Order 11990 *Protection of Wetlands*, directs each federal agency to provide leadership and take action to minimize destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing and disposing of Federal lands and facilities; and (2) providing Federally undertaken, financed or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating and licensing activities.

A FONPA must be submitted to the Major Command when the alternative selected is located in wetlands or floodplains and must discuss why no other practical alternative exists to avoid impacts.

The Proposed Action at CCAFS would result in the construction of a new boat ramp inside the Trident Basin, a new concrete floating dock system located just outside and to the south of the Trident Turning Basin in addition to a concrete storage building located on land behind the new dock. Also, removal and disposal of the existing dock piling and ganging located in the Trident Turning Basin would be necessary for the installation of new concrete piles for the construction of the new "L" shaped floating dock and gangway. The docks would be sited to minimize disturbance to natural attributes within the flood zone, such as native plant communities. The docks at CCAFS would be located in the 100 year floodplain and the proposed road and shelter would be located in the 500 year floodplain. Additionally, the proposed action would be located on the sandy shoreline, considered an estuarine wetland. However, the shoreline has been previously disturbed with activities including rip-rap offshore for stabilization for the ramp site. There is no other practicable alternative that would avoid wetlands and floodplains, and still meet the purpose and need for proposed action.

Finding of No Significant Impact

In accordance with the Council on Environmental Quality Regulations implementing the National Environmental Policy Act of 1969 (Public Law 91-190, 42 U.S.C. §§4321-4347), as amended and 32 CFR 989, 15 Jul 99 and amended 28 Mar 01, an assessment of the identified environmental effects has been prepared for the proposed demolition, construction, operation and maintenance of boat docks and associated shelters and infrastructure at CCAFS Florida. I find that the action will have no significant impact on the quality of the human environment; thus, an Environmental Impact Statement is not warranted.

19 Dec 06

Date

RICHARD E. WEBBER
Major General, USAF
Director of Installations and Mission Support

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APPENDICIES

Acronyms and Abbreviations

ACM	Asbestos-Containing Material
AF	Air Force
AFI	Air Force Instruction
ART	Asbestos Recovery Team
BMPs	Best Management Practices
BO	Biological Opinion
CCAFS	Cape Canaveral Air Force Station
CEQ	Council on Environmental Quality
45 CES/CEV	45 Civil Engineering Squadron, Environmental Flight
45 CES/CEVP	45 Civil Engineering Squadron, Environmental Flight, Conservation, and Planning Element
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
dB	decibel
dBA	“A-weighted” logarithmic scale
DoD	Department of Defense
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EIAP	Environmental Impact Analysis Process
EO	Executive Order
EPA	Environmental Protection Agency
ER	Eastern Range
ERP	Emergency Resource Permit
ESA	Endangered Species Act
FAAQS	Florida Ambient Air Quality Standards
FAC	Florida Administrative Code
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FETSA	Florida Endangered and Threatened Species Act

FMC	Fishery Management Official
FNAI	Florida Natural Areas Inventory
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
FFWCC	Florida Fish and Wildlife Conservation Commission
HAP	Hazardous Air Pollutant
HAPC	Habitat Areas of Particular Concern
INRMP	Integrated Natural Resources Management Plan
IRP	Installation Restoration Program
J-BOSC	Joint-Base Operations Support Contract
LPS	Low Pressure Sodium
KSC	Kennedy Space Center
MSFCMA	Magnuson Stevens Fisheries Management Act
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NASA	National Aeronautics and Space Administration
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NOx	Nitrogen Oxides
NOAA	National Oceanic and Atmospheric Administration
NWI	National Wetland Inventory
ODS	Ozone Depleting Substance
OPlan	Operations Plan
OSHA	Occupational Safety and Health Administration
PAFB	Patrick Air Force Base
PM	Particulate Matter
PPE	Personal Protective Equipment
RACM	Regulated Asbestos Containing Material
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SAFMC	South Atlantic Fishery Management Council
45 SF	45th Space Flight
SGS	Space Gateway Support
SJRWMD	Saint John's River Water Management District

SOx	Sulfur Oxides
SR	State Route
SSC	Species of Special Concern
45 SW	45th Space Wing
T&E	Threatened and Endangered
UCF	University of Central Florida
UL	Underwriters Laboratories Inc
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USFWS	United States Fish and Wildlife Service
VOC	Volatile Organic Compound

1.0 PURPOSE AND NEED FOR ACTION

This Environmental Assessment (EA) has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations, Environmental Impact Analysis Process (EIAP), as promulgated in Title 32 of the Code of Federal Regulations (CFR) Part 989, and Department of Defense (DoD) Directive 6050. The EA evaluates the potential environmental consequences associated with the construction of a new boat dock and concrete shelter building just outside and to the south of the Trident Turning Basin and reconstruction of the existing boat dock in addition to construction of a security boat ramp at the northeast corner of the Trident Turning Basin located at Cape Canaveral Air Force Station (CCAFS).

Chapter 1.0 of this EA provides background information for this action and describes the purpose of and need for the Proposed Action. A description of the Proposed Action and the No Action Alternative is provided in Chapter 2.0. Chapter 3.0 describes the existing conditions of specified environmental resources that could be affected by implementation of the Proposed Action alternatives. Chapter 4.0 addresses how those resources would be affected by implementation of the Proposed Action alternatives.

1.1 Cape Canaveral Air Force Station (CCAFS) Background

CCAFS is located on the easternmost coast of the Canaveral Peninsula approximately 20 miles north of Patrick Air Force Base (PAFB). The Canaveral Peninsula is a barrier island located approximately 155 miles south of Jacksonville, 210 miles north of Miami, and approximately 60 miles east of Orlando. It is 4.5 miles wide at its widest point. The northern boundary of CCAFS abuts the KSC boundary on the barrier island. The southern boundary abuts Port Canaveral. The Banana River separates CCAFS from KSC. The Atlantic Ocean borders CCAFS along its eastern margin. CCAFS occupies approximately 15,800 acres (Figure 1-1). The proposed action activities are anticipated to occur primarily in the Port Canaveral area including the Trident Turning Basin and its adjacent shoreline (Figure 1-2).

CCAFS is designated as one of the Eastern Range (ER) stations. The primary mission of the ER is to provide launch and tracking facilities, safety procedures, and test data to a variety of users. Major users at CCAFS include the United States Air Force (USAF), the US Navy, the National Aeronautics and Space Administration (NASA) and private industries. The USAF, Space Command, and 45th Space Wing (45 SW) operate CCAFS. The primary mission of the 45 SW is to develop, maintain, operate, and manage the ER.

CCAFS has 81 miles of paved roads connecting the various launch support facilities with the centralized Industrial Area. A total of 36 launch complexes have been constructed at CCAFS. Currently, 12 launch complexes are active and 24 are inactive. Approximately 7,400 people work at CCAFS. The majority of the coastal land south of CCAFS has been developed.

Figure 1-1: Locator Map

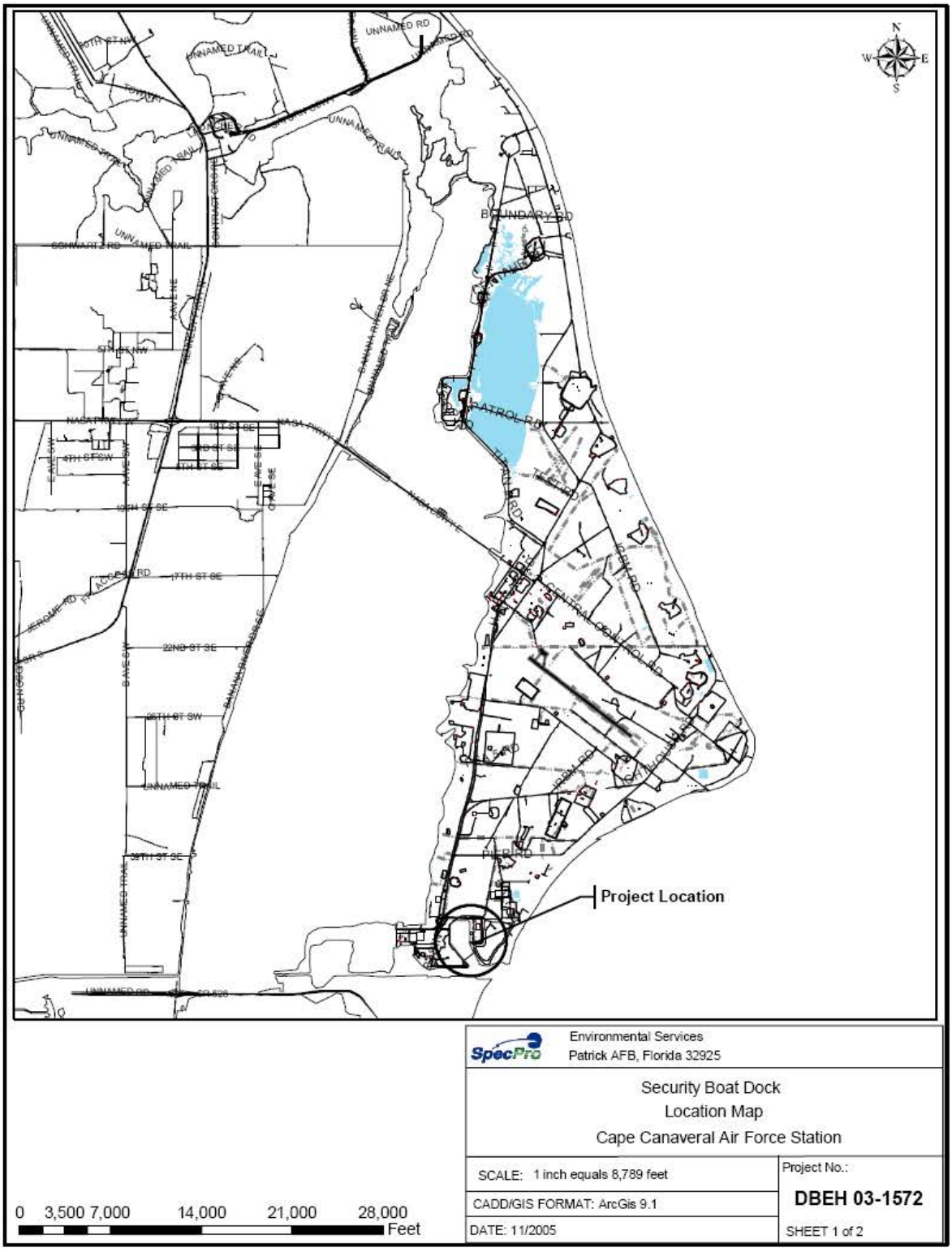

Figure 1-2: CCAFS Proposed Action Location

1.2 Purpose and Need for Action

The purpose of the Proposed Action is to construct a new boat dock and concrete shelter just outside and to the south of the Trident Turning Basin and reconstruction of the existing boat dock in conjunction with a security boat ramp at the northeast corner of the Trident Turning Basin located at CCAFS. An access road would also be constructed. Security water crafts patrol the waters off the Poseidon Wharf, Port Canaveral main channel, Trident Wharf, as well as offshore in the Atlantic Ocean. Currently, security personnel utilize the same small dock in the Trident Turning Basin for Air Force and Navy security boats with no space available to stage other necessary watercraft. Serious injuries have occurred due to the over crowded condition at the Trident Turning Basin.

Figure 1-3: Existing Boat Dock in Trident Turning Basin at CCAFS

2.0 Alternatives Including the Proposed Action

Title 40 CFR Parts 1500-1508, *Council of Environmental Quality,* contains regulations for implementing the procedural provisions of NEPA.

Alternatives analyzed for potential impacts to the environment in the EA will include Alternative 1 (Proposed Action) and Alternative 2 (No Action).

2.1 Alternative 1: Proposed Action

The Proposed Action at CCAFS is the construction of a floating dock system just outside and to the south of the Trident Turning Basin. The Proposed Action would include the construction of a new dock, 136 feet in length, with capability to accommodate six (6) security boats and a 10' x 20' concrete shelter building with area lighting and utility hook up. Boats will not be permanently moored, but will be re-positioned to other areas as dictated by operations. During storms/hurricanes, the boats will be lifted out of the water and placed in a protected area elsewhere on CCAFS. An access road to the shelter would also be constructed under the Proposed Action.

Also included in the Proposed Action is the removal and disposal of the existing dock piling and ganging inside the Trident Turning Basin for the installation of the new 10' x 50' floating dock with an "L" shaped addition at the end of the 10' x 50' new dock replacing the existing dock.

The existing aluminum ramp will be re-used, and the three existing light/power pedestals on the existing dock will be removed and relocated to the new floating dock. The existing wooden dock and the four associated pilings will be removed and disposed of. The new 10' x 50' floating dock will be located in the same direction as the removed dock, but will be extended approximately four feet to better utilize the existing ramp. Additional flotation will be added to support gangway loads.

The second dock will form an "L" at the end of the 50" dock and will be 10' wide by 80' long. The dock will include (but is not limited to) eight 12-inch diameter, 40' long wooden pilings, internal pile guides, rubrails, cleats, and two power/light/water pedestals. Both docks will have aluminum sketching.

The new docks will be constructed of aluminum alloy 6061-T6. The hardware, bolts, nuts, washers, and rods will be made of Type 316 Stainless Steel. The 10" aluminum cleats will be continuously welded to the aluminum deck, and the internal pile guides will be sized for the pilings with UHMW rollers. The appropriate-sized wooden pilings will have a "pointed" top-cap to discourage bird roosting. The deck edging will be non-marring, non-yellowing extruded marine grade white vinyl. The two new light/power/water pedestals will meet Underwriters Laboratories Inc (UL) standards and have a hinged base and top. All electrical conduits and fittings will be waterproof, and will be 120 VAC 20 amp per pedestal.

Finally, the Proposed Action includes the construction of a new boat ramp in the northeast corner of the Trident Turning Basin.

Because of the nature of the requirement, the Proposed Action activities will be located in floodplains and wetlands area. However, even if sited elsewhere, the boat docks would always be located in a 100-year floodplain. Due to the current utilization of the same small dock in the Trident Turning Basin for Air Force and Navy security boats, serious injuries have occurred due to the over crowded condition at the Trident Turning Basin. Therefore new structures are imperative for sufficient docking capabilities, relieving the existing hazards associated with watercraft overcrowding at the dock.

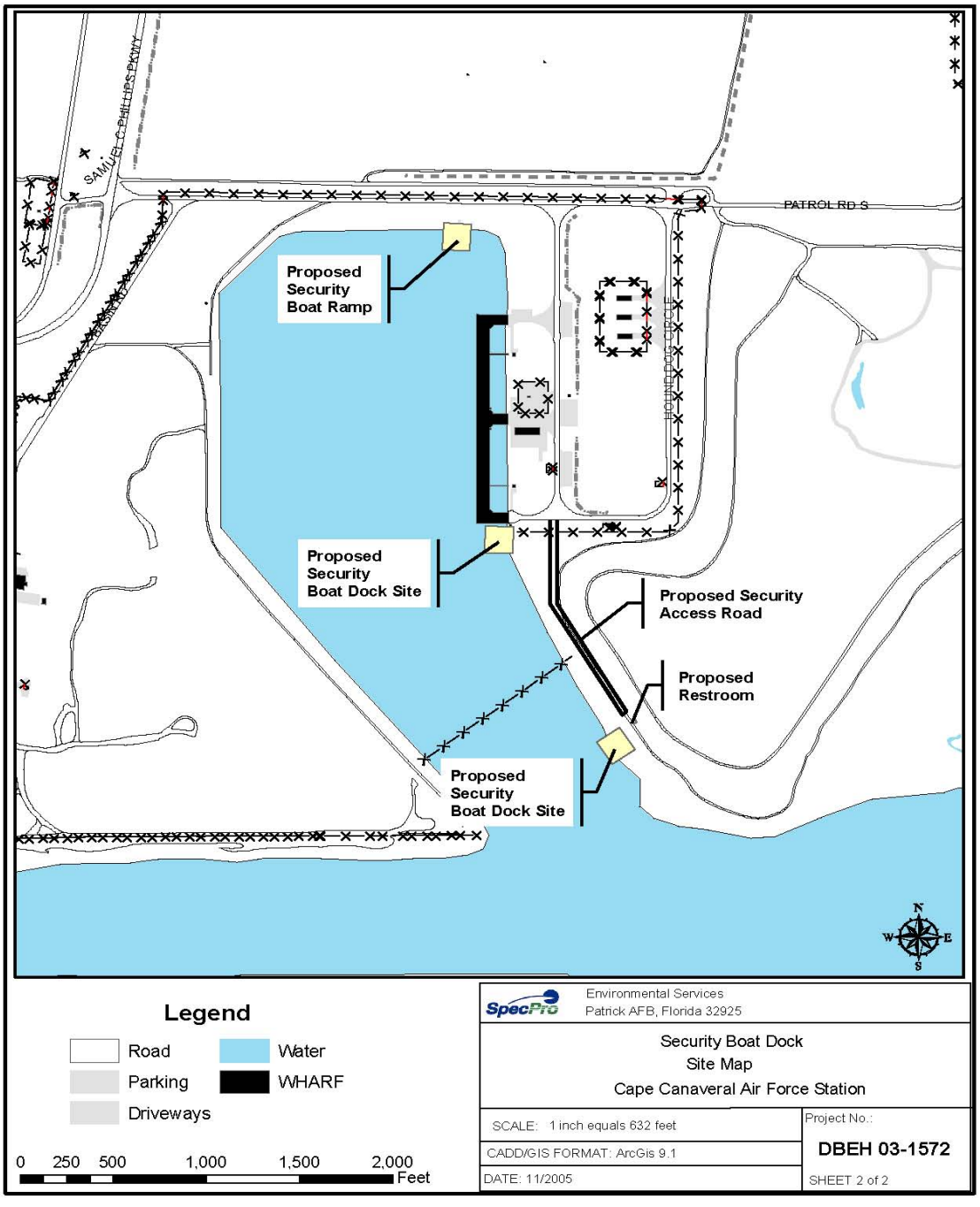

Figure 2-1: CCAFS Proposed Boat Dock Location

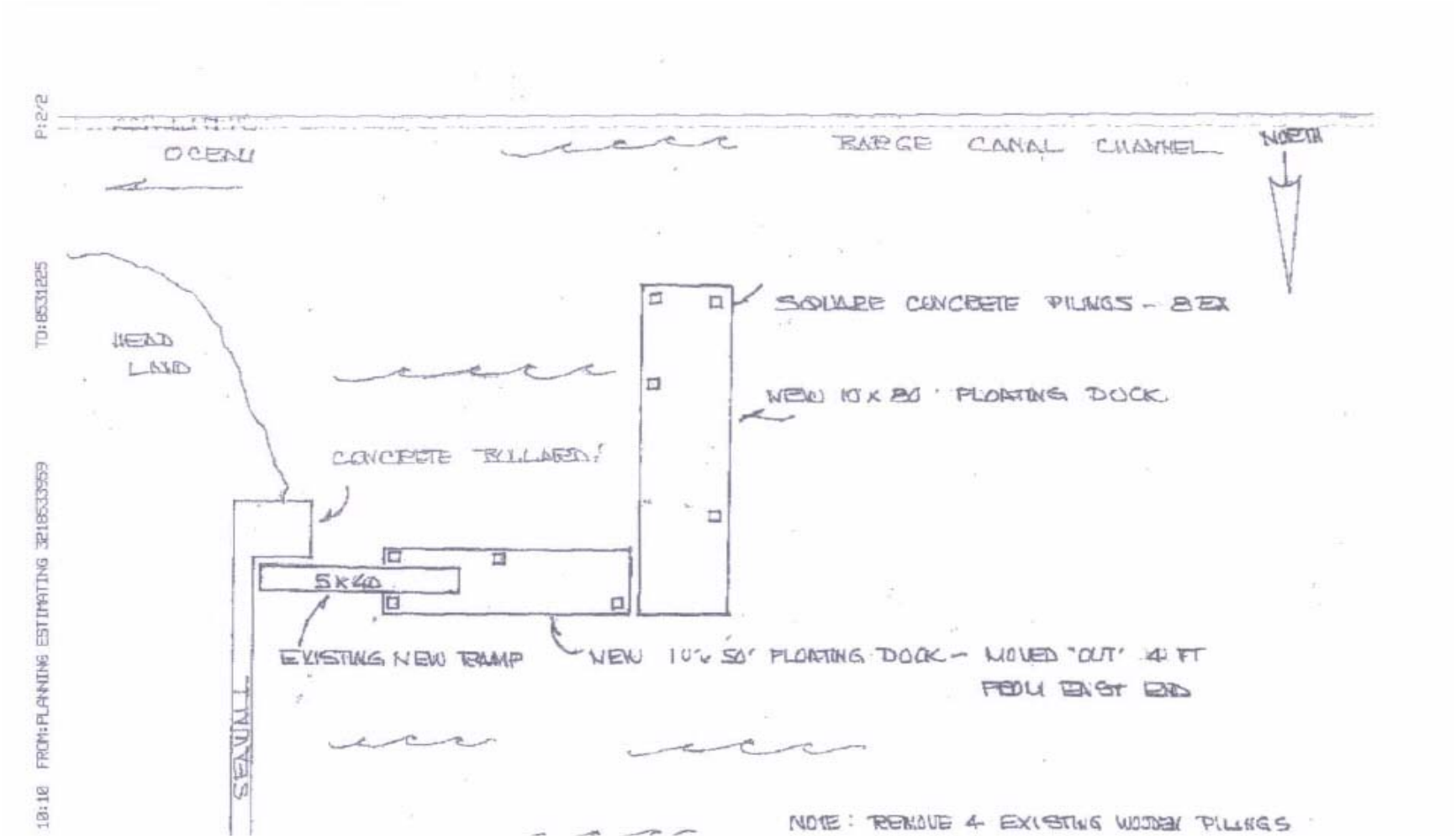

Figure 2-2: Proposed Replacement Floating Dock Located at CCAFS

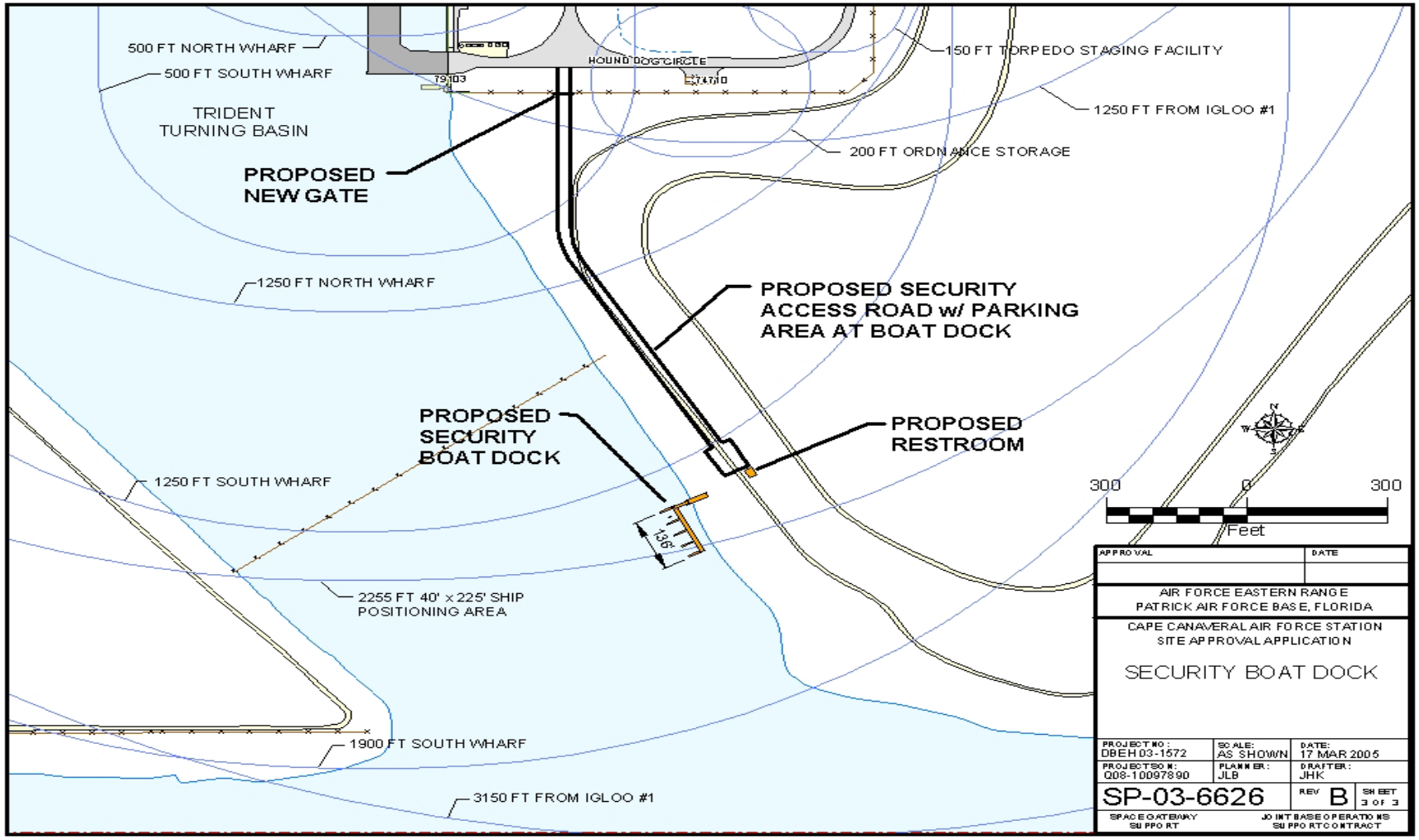

FIGURE 2-3: PROPOSED NEW FLOATING DOCK LOCATED AT CCAFS

2.2 Alternative 2: No Action Alternative

Under the No Action Alternative, the current utilization of the same small dock in the Trident Turning Basin by Air Force and Navy security personnel would continue. No dock exists to accommodate the number of watercraft security currently uses. Security requires a dock of sufficient space to stage watercraft during inclement weather; the dock in the Trident Turning Basin is not large enough. Injuries have occurred because of the over crowded condition at the existing dock. Also, there is no concrete boat ramp in the existing area, nor are there facilities for security personnel. Currently, security personnel must trailer the boats to the south side of Port Canaveral for access. For these reasons the No Action Alternative is not preferred.

2.3 Alternatives Considered But Not Carried Forward

2.3.1 New Boat Dock at Poseidon Wharf on CCAFS

Initially it was anticipated to construct the 135' floating dock and concrete shelter in the Poseidon Wharf area. However, due to security issues and anticipation of the Poseidon Wharf being turned over to Port Authorities, a new dock at Poseidon Wharf is no longer a consideration for the Proposed Action.

2.4 Potential Environmental Issues

Ten broad environmental components were initially considered to provide a context for understanding the potential effects of the Proposed Action alternatives and as a basis for assessing the significance of potential impacts. The areas of environmental consideration were air quality; biological resources; cultural resources; geology, soil, and water resources; hazardous materials and waste; health and safety; infrastructure and transportation; land use and zoning; noise; and socioeconomics.

No significant impacts from implementation of either of the alternatives have been identified for any of the resource areas examined in this document. Minor impacts associated with several of the environmental components are briefly summarized below, and a more detailed analysis of potential impacts to the remaining resource areas is presented in Chapter 4.0.

2.4.1 Issues Eliminated from Detailed Analysis

Following a preliminary analysis in an AF Form 813, *Request for Environmental Impact Analysis* for project activities at CCAFS (Appendix A), the Air Force (AF) determined that no impacts, or less than significant impacts, would be anticipated to air quality; cultural resources; geology and soils, land use and zoning, health and safety, infrastructure and transportation, and noise. The following is a summary of the minor impacts potentially associated with these categories.

2.4.1.1 Air Quality

Air Force Instruction (AFI) 32-7040, *Air Quality*, identifies AF requirements for an air quality compliance program. Other applicable air quality requirements are identified in Table 2-1.

Table 2-1: Summary of Air Quality Requirements

Law or Rule	Permit/Action(s)	Requirement	Agency or Organization
AFI 32-7086, Chapter 4	Minimize loss and conduct recovery, recycling, and reuse of ozone depleting substances (ODS) to the maximum extent practicable.	Manage to minimize releases of ODSs into the environment.	Air Force (AF)
Florida Administrative Code (FAC) Chapter 62-257, Asbestos Program and 40 Part 61, Subpart M, National Emission Standards for Hazardous Air Pollutants for Asbestos	Remove asbestos prior to demolition activities, notify Florida Department of Environmental Protection and Asbestos Recovery Team (ART); comply with Asbestos Management Plan.	Prevent the release of significant amounts of asbestos fibers to the outside air.	45 SW, Florida Department of Environmental Protection and US Environmental Protection Agency
AFI 32-7040	Estimate air emissions for inclusion in the Air Emissions Inventory	Track vehicle/equipment use and welding/soldering activities.	AF

CCAFS is located in an area that is in attainment for all criteria air pollutants; therefore, a conformity determination is not required. However, several sources of air emissions were considered that could result from implementation of the Proposed Action. Changes in local air quality resulting from these sources would not be significant. Each potential source of air pollution is reviewed below.

Asbestos

Although not anticipated, should any regulated asbestos containing materials be encountered during the demolition of the dock, all activities must be performed in accordance with Asbestos NESHAP (40 CFR 61 Subpart M), 62-257, Florida Administrative code, and the 45 SW Asbestos Management OPLAN.

Vehicle Use

Vehicles would emit exhaust (carbon monoxide (CO), nitrogen oxides (NO_x), and sulfur dioxide (SO_2) during project activities. Dust particles (*i.e.*, particulate matter (PM)) would also be suspended during demolition and construction activities. The current Title V Air Operating Permit would not need to be amended, as the impacts associated with the Proposed Action would be minor and are covered by the existing permits.

Welding and Soldering

Small welding and soldering operations were previously exempt from air permitting requirements. However, new Title V requirements require the AF to track and quantify

air emissions from previously un-permitted sources. New welding and soldering operations and changes in operations must be coordinated with the 45 Civil Engineering Squadron, Environmental Flight, (45 CES/CEV) office. Estimates of hourly and annual use of materials and a short process description must be submitted to 45 Civil Engineering Squadron, Environmental Flight, Conservation, and Planning Element (45 CES/CEVP).

2.4.1.2 Geology and Soils

Physical resources of an area consist of the surface and subsurface soil and bedrock materials and their inherent properties, including geology and surface topography. Soils are typically described according to their complex types and physical characteristics. Discussions of geology include regional and site-specific geomorphic conditions and the general geological setting of an area.

Topography is the change of vertical (*i.e.,* elevation) over the surface of the area. The topography of an area is generally the product of natural influences (*i.e*., erosion, seismic activity climatic conditions, and the underlying geologic materials), but can be influenced by human activity. A discussion of topography typically includes a description of surface elevations, slope, and distinct physiographic features (*i.e.*, mountains, ravines, and depressions).

The Proposed Action area primarily consists of sandy shoreline. At CCAFS, the proposed Security Access Road and associated concrete shelter crosses a previously disturbed area comprised of Quartzipsimments and Palm Beach Soils (Figure 2-3). A comprehensive discussion of these types of soils can be found in the 2005 Land Clearing PEA.

The potential for erosion would be highest during construction activities. To reduce the impacts of erosion, standard construction best management practices (BMPs) would be used. These measures include the use of silt fences, mulch, and siltation basins.

The project areas are located in previously disturbed areas. No new dredging will be required. It is anticipated that four of the new pilings would be placed in the same positions as the removed pilings. However, the remaining four concrete pilings would require pile driving. The shock waves generated from pile driving can have adverse effects on fish. However, because of the small number of pilings and their relatively small diameter, no significant impact is anticipated. Prior to any digging, an Excavation Permit will be required. This permit can be obtained through the Space Gateway Support (SGS) Mission Support Excavation Administrator.

No significant impact to geology or soils is anticipated, provided proper BMPs are implemented and monitored.

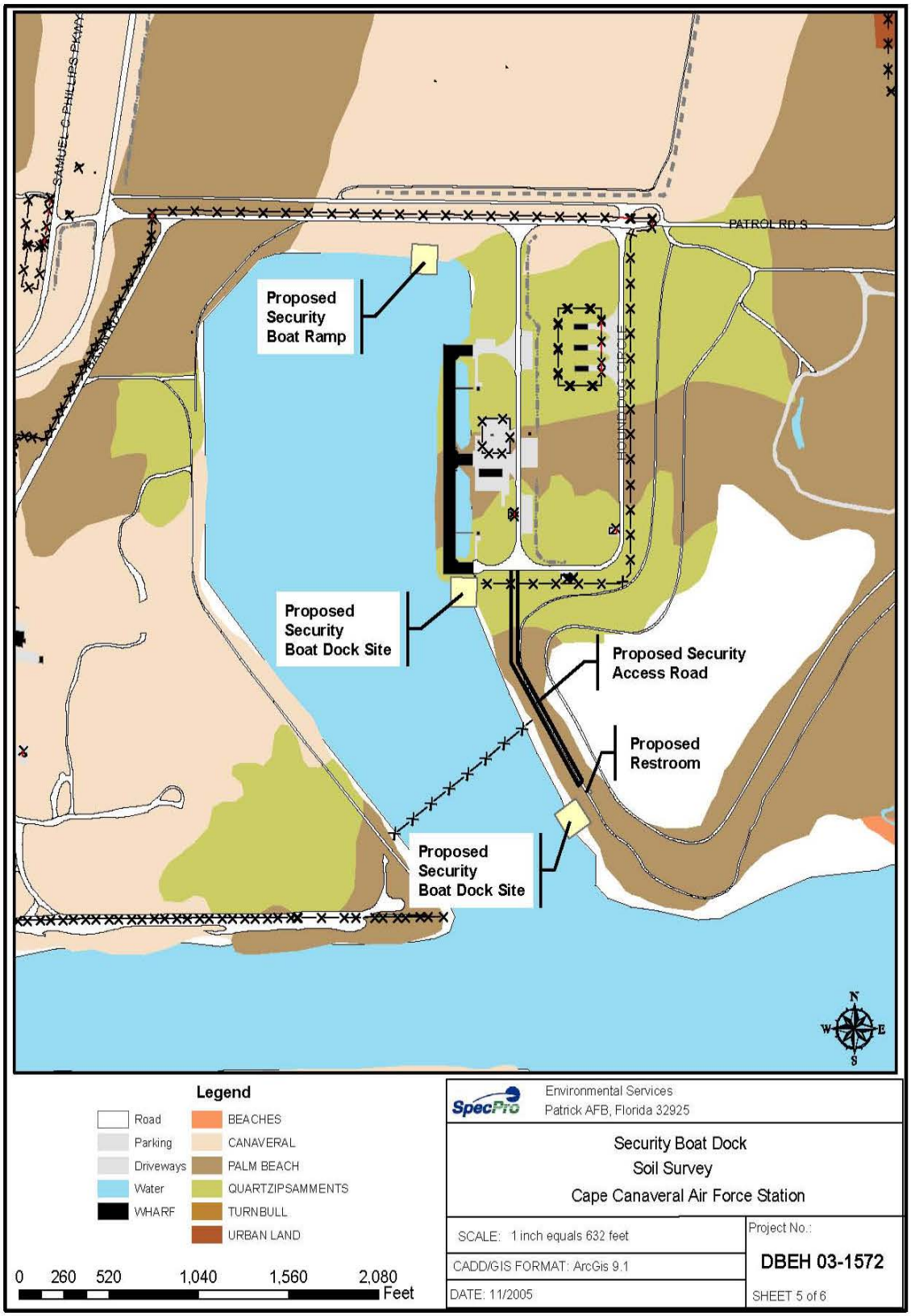

Figure 2-3: Soil Survey at CCAFS

2.4.1.3 Cultural Resources

AFI 32-7065, *Cultural Resources Management*, provides guidelines for the protection and management of cultural resources on AF-managed lands. Cultural resources include prehistoric-archaeological, historic, architectural, and Native American resources. Areas of potential impact include properties, structures, landscapes, or traditional cultural sites that qualify for listing in the National Register of Historic Places.(NRHP) Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) requires federal agencies to consider the effects of their actions on historic properties.

Existing surveys do not indicate the presence of cultural resources in the Proposed Action areas on CCAFS. Based on their past use, it is unlikely that intact cultural resources would be present in these areas. No survey, despite an intense effort and excellent research sampling strategy, precludes the possibility that an archaeological site may be discovered during subsequent clearing activities. Federal cultural resource preservation statutes mandate that if artifacts become apparent during construction or clearing, such materials should be identified and evaluated by an archaeologist. Should human remains be encountered, federal statutes specify that work shall cease immediately and the proper authorities be notified. (Federal Register, Rules and Regulations, Dec. 4, 1995, Vol. 60, No. 232:62161, Section 10.5).

2.4.1.4 Infrastructure and Transportation

Infrastructure and transportation includes utilities, solid waste management, and transportation networks. AFI 32-7042, *Solid and Hazardous Waste Compliance*, identifies compliance requirements for solid waste. A summary of requirements for Infrastructure and Transportation is identified in Table 2-2. No significant impacts are anticipated to infrastructure and transportation from the Proposed Action.

Table 2-2: Summary of Infrastructure and Transportation Requirements

Law or Rule	Permit/Action(s)	Requirement	Agency or Organization
Joint-Base Operations Support Contract Excavation/Dig Permit Procedure"	Utility Locate/Excavation Permit	Any excavation activity	Space Gateway Support Mission Support, Excavation Administrator

Solid Waste

Solid waste would be managed in accordance with the instructions set forth in the contract. The 45 SW supports the recycling of Construction and Demolition materials to the greatest extent possible. If the contractor is directed to dispose of construction and demolition and/or asbestos containing materials in the CCAFS landfill, all requirements specified in the CCAFS Landfill Operations Plan must be met. Prior to any disposal activities, the contractor must complete the "Landfill Disposal Verification Form."

All materials, equipment, and metals identified as potentially salvageable would be staged for possible recycling or reuse. It is anticipated that all non-hazardous, non-recyclable construction and demolition debris would be disposed in the Brevard County Landfill. Use of the CCAFS landfill is mandatory for Asbestos Containing Material (ACM)

disposal. The 45 CES/CEVC must approve disposal of any wastes or materials into the sewage treatment system.

The purchase of construction materials containing recycled materials found on the list of "Environmental Protection Agency (EPA) Designated Guideline Items" at http://www.ofee.gov would be maximized. Prior to project closeout, the contractor would generate a report that describes the materials and quantities specified/used, or justification as to why designated guideline items were not utilized would be provided to 45 CES/CEV.

Utilities

Utility structures and lines would be identified prior to any excavation and a Joint-Base Operations Support Contract (J-BOSC) Excavation Permit would be obtained. Should unidentified underground utilities be encountered during excavation, operations should cease until all utilities are properly identified.

Transportation

A new road at CCAFS would be necessary to access the new boat dock and concrete shelter building just outside and to the south of the Trident Turning Basin. Traffic may be temporarily delayed to allow construction vehicles to safely enter and exit the work area and to slow the flow of traffic adjacent to active work zones. The location of the new road would be located in a previously disturbed area used as a spoil area.

2.4.1.5 Noise

The EPA administers the Noise Control Act of 1972, and has identified 65 dB (A-scale) as a desirable noise level for compatible land uses. This level is not regarded as a noise standard, but as a basis to set appropriate standards that should also factor in local considerations and issues.

Noise impacts from the operation of construction equipment are usually limited to a distance of 1,000 feet or less. Vehicles associated with the Proposed Action typically have a dBA between 65 and 100, at a distance of 50 feet (USEPA, 1971). The proposed project area at CCAFS is located at the Trident Wharf; there are no sensitive receptors (*e.g.,* schools, hospitals) in the vicinities.

In accordance with 29 CFR 1910, protection against the effects of noise exposure would be provided. When employees are subjected to sound levels, exceeding those listed in Table 2-3, feasible administrative or engineering controls would be utilized. If such controls do not reduce sound levels to the levels presented in Table 2-3, hearing protection would be provided and used to reduce exposure.

Table 2-3: Permissible Noise Exposures

Duration Per Day (Hours)	Slow Response Sound Level (dBA)
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25 or less	115

2.4.1.6 Health and Safety

The discussion of human health and safety includes both workers and the general public. Safety issues include injuries or deaths, which are usually the result of one-time accidents. Injuries include impacts on a human resulting from an exposure to toxic concentrations of chemicals/hazardous materials, radiant heat, or overpressures from accidental releases or explosions (such as flying debris), or accidents resulting from working in confined spaces, and that require medical treatment or hospitalization. Health issues result from activities where people may be impacted over a long period of time rather than immediately.

The standards applicable to the evaluation of health and safety effects differ for workers and the public; thus, it is useful to consider each separately.

Occupational Safety and Health Administration (OSHA) is responsible for protecting worker health and safety in non-military workplaces. OSHA regulations are found in 29 CFR. For Air Force operations, AFI 91-301 and AFI 91-302, contain the Air Force's Safety program, and provide the basis for worker safety programs. Table 2-4 provides as summary of these requirements.

Table 2-4: Summary of Health and Safety Requirements

Law or Rule	Permit/Action(s)	Requirement	Agency or Organization
Occupational Safety and Health Standards, 29 CFR 1910	Various	Protect health and safety of workers	Occupational Safety and Health Administration
Safety and Health Regulations for Construction, including Subpart T "Demolition", 29 CFR 1926			

2.4.1.7 Land Use and Zoning

In recognition of the increasing pressures of over-development upon the nation's coastal resources, Congress enacted the Coastal Zone Management Act (CZMA) in 1972. The CZMA encourages states to preserve, protect, develop, and, where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats.

The entire State of Florida is defined as being located within the coastal zone. However, for planning purposes, the Florida Department of Environmental Protection (FDEP) has established a no development zone, delineated by the “Coastal Construction Setback Line.” In Brevard County, this zone extends from the mean high water (MHW) inland 75 feet, to include the natural coastal dunes. The CZMA authorizes a State-Federal partnership to ensure the protection of coastal resources. Although federally owned land is technically exempt from the restrictions of this law, CCAFS has doubled the county no development zone by enforcing a 150-foot zone of no construction. Proposed actions that will occur on CCAFS are evaluated for consistency with the CZMA, as applicable.

The Secretary of Commerce delegated the administration of the CZMA to the National Oceanic and Atmospheric Administration (NOAA). The Office of Ocean and Coastal Resource Management administers individual state programs.

Applicable federal actions must be consistent with NOAA's federal consistency regulations at 15 CFR Part 930. Federal consistency is required for federal actions that are defined as federal activities, including any development projects (15 CFR Part 930, Subpart C). Subpart C regulations require that all federal activities and development projects be consistent to the maximum extent practicable with federally approved state Coastal Zone Management (CZM) programs. Activities must be reviewed to determine which directly affect the coastal zone of states with approved plans and provide a written "consistency determination" to the authorized state CZM agency for all activities directly affecting the state's coastal zone. As part of the Environmental Resource Permit (ERP) process, the Proposed Action would be reviewed to determine consistency with Florida’s CZM program. No impacts are anticipated.

Table 2-5: Summary of Land Use and Zoning Requirements

Law or Rule	Permit/Action(s)	Requirement	Agency or Organization
Coastal Zone Management Act	Development projects must be consistent to the maximum extent practicable with Florida's Coastal Zone Management Program	Preserve, protect, develop, and, where possible, restore or enhance valuable natural coastal resources such as floodplains, and dunes	Florida Department of Environmental Protection (FDEP), Air Force
Florida Statutes, Section 373.428	Federal Consistency	When an activity regulated under this part is subject to federal consistency review under Section 380.23, the final agency action on a permit application submitted under this part shall constitute the state's determination as to whether the activity is consistent with the federally approved Florida Coastal Management Program. Agencies with authority to review and comment on such activity pursuant to the Florida Coastal Management Program shall review such activity for consistency with only those statutes and rules incorporated into the Florida Coastal Management Program and implemented by that agency. An agency which submits a determination of inconsistency to the permitting agency shall be an indispensable party to any administrative or judicial proceeding in which such determination is an issue; shall be responsible for defending its determination in such proceedings; and shall be liable for any damages, costs, and attorneys' fees should any be awarded in an appropriate action as a consequence of such determination.	NOAA
Florida Statutes, Section 380.23	Federal Consistency	(1) When a federally licensed or permitted activity subject to federal consistency review requires a state license, the issuance or renewal of a state license shall automatically constitute the state's concurrence that the licensed activity or use, as licensed, is consistent with the federally approved program. When a federally licensed or permitted activity subject to federal consistency review requires a state license, the denial of a state license shall automatically constitute the state's finding that the proposed activity or use is not consistent with the state's federally approved program, unless the United States Secretary of Commerce determines that such activity or use is in the national interest as provided in the Coastal Zone Management Act.	NOAA

Law or Rule	Permit/Action(s)	Requirement	Agency or Organization
Florida Administrative Code 62B-33.004 (3) (b)	Exemptions from Permit Requirements.	(3) In addition to the exemptions provided in Section 161.053(12), F.S., the following are exempt from the provisions of Section 161.053, F.S., and this rule chapter: (b) Construction, excavation, and damage or destruction of vegetation conducted by the United States Government on lands owned and maintained by the United States Government.	FDEP

2.4.1.8 Hazardous Materials and Hazardous Waste

During Proposed Action activities, it is anticipated that hazardous or regulated materials such as fuels and lubricants would be present

Hazardous wastes are materials whose disposal is regulated under the Resource Conservation and Recovery Act (RCRA). They are either listed in 40 CFR 261 "Identification and Listing of Hazardous Waste," applicable State and local waste management regulations, or possess at least one of the following four characteristics:

- Ignitability-Common examples are: parts cleaning solvents, kerosene, and paint thinner.
- Corrosivity-Common examples are: battery acid, aluminum brighteners/cleaners, many floor cleaners, and caustic paint strippers.
- Reactivity-A common example is potassium cyanide.
- Toxicity-Common examples are: materials contaminated with other hydrocarbon products; water and sludge that have accumulated in the bottom of fuel storage tanks, used oil tanks or other vessels; spent solvents; debris contaminated with used petroleum, oil, or lubricants such as used oil filters, shop rags and absorbents; spent antifreeze; and paint wastes.

Asbestos is a regulated substance because it is a carcinogen and a cause of asbestosis (*i.e.,* lung disease). Friable ACM, which can be pre-existing or generated during a demolition activity, refers to any material containing more than one percent asbestos that can be crumbled, pulverized, or reduced to powder when dry, by using hand pressure or similar mechanical pressure

All materials and wastes would have to be properly used, stored, and disposed of in accordance with the 45 SW's OPlan 19-14, *Petroleum Products and Hazardous Waste Management Plan*. The policies, procedures, responsibilities, and required actions identified in the 45 SW's Full Spectrum Threat Response Plan 10-2, Volume II, *Hazardous Material Emergency Planning and Response* governing the emergency response to the actual or potential accidental release or spill of hazardous materials/chemicals would be followed. All ACM must be abated and disposed of properly according to AFI 32-1052, *Facility Asbestos Management.* For more detailed information on ACM disposal procedures refer to the *Environmental Assessment for the for the Deactivation and Turnover of the Titan Space Launch Vehicle Capability at CCAFS* (2005).

The USAF's instructions for obtaining and maintaining compliance with hazardous waste regulations has been defined in AFI 32-7042, *Solid and Hazardous Waste Compliance* and AFI 32-7086, *Hazardous Materials Management..* The 45 SW OPLAN 19-14, *Petroleum Products and Hazardous Waste Management Plan*, outlines specific measures for proper collection, management and disposal of petroleum products/waste and hazardous/non-hazardous wastes. The management of hazardous wastes at 45 SW is the responsibility of the individuals or organizations generating the hazardous waste.

Table 2-6: Summary of Hazardous Materials and Waste Requirements

Law or Rule	Permit/Action(s)	Requirement	Agency or Organization
Threat Response Plan, Hazardous Material Emergency Planning and Response (45 SW OPlan 10-2, Volume II)	Various	Follow policies, procedures, responsibilities, and required actions that govern the emergency response to the actual or potential accidental release or spill of hazardous materials/chemicals.	45 SW
Petroleum Products and Hazardous Waste Management Plan (OPlan 19-14)	Consult with OPlan 19-14 for disposal/recycling procedures.	Properly dispose of hazardous/universal wastes.	Environmental Flight, 45 SW

2.4.1.9 Socioeconomics

Socioeconomics comprise such interrelated resources as population, employment, income, temporary living quarters (during construction activities) and public finance. It is not anticipated that the Proposed Action would affect employment patterns on a permanent basis or induce substantial growth or growth-related impacts. No increase in population levels would result.

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3.0 AFFECTED ENVIRONMENT

In compliance with NEPA and CEQ guidelines, this Chapter describes the existing environment of the Proposed Action area for those resources/categories that were not previously eliminated from further analysis (see Chapter 2). This information serves as a baseline from which to identify and evaluate potential environmental changes resulting from implementation of the Proposed Action. The resources/categories addressed in this Chapter are water resources and biological resources.

3.1 Water Resources

AFI 32-7041, *Water Quality Compliance*, identifies essential AF actions to achieve and maintain compliance with the Clean Water Act (CWA), and other applicable Federal, State, and local water quality standards. It requires adherence to applicable State and local water quality standards when they are more stringent than Federal standards. Table 3-1 identifies applicable requirements for water resources.

Table 3-1: Summary Water Resources Requirements

Law or Rule	Permit/Action(s)	Requirement	Agency or Organization
Clean Water Act (CWA)	Section 401 Water Quality Certification*	FDEP review of CWA Section 404 dredge and fill permit applications submitted to the U.S. Army Corps of Engineers (USACE) to certify that project will not cause or contribute to a violation of Florida water quality standards.	FDEP
Clean Water Act, Section 402	National Pollutant Discharge Elimination System Permit	Obtain permit and follow Best Management Practices	St. John's River Water Management District, Florida Department of Environmental Protection and US Environmental Protection Agency
Various	Environmental Resource Permit	Obtain permit for any activity that could affect wetlands, alter surface water flows, or contribute to water pollution.	FDEP, SJRWMD and SFWMD

The primary ROI for CCAFS is the Port Canaveral area including the Trident Turning Basin and immediately surrounding land. The port is an artificial harbor that supports both commercial and industrial activities. The Canaveral Locks connect the harbor to the Banana River. Civilian and military vessels use two of the Port Canaveral turning basins. A third basin (eastern), constructed by the Navy for the Trident Program, is restricted to military vessels. The security water crafts will patrol the waters off the Poseidon Wharf, Port Canaveral main channel, Trident Wharf, as well as offshore in the Atlantic Ocean.

CCAFS is within the Florida Middle East Coast Basin and situated on a barrier island that separates the Banana River from the Atlantic Ocean. This basin contains three major bodies of water: the Banana River immediately to the west, Mosquito Lagoon to

the north, and farther west, the Indian River, separated from the Banana River by Merritt Island. All three water bodies are estuarine lagoons, with circulation provided mainly by wind-induced currents.

The surficial and Floridan aquifer systems underlie CCAFS. The approximately 70-foot-thick surficial aquifer system, generally comprised of sand and marl, is unconfined. The water table in the aquifer is generally a few feet below the ground surface. The surficial aquifer is recharged by infiltration of precipitation through the thin vadose zone.

3.2 Biological Resources

Despite their heavily developed states, the Proposed Action areas serve as feeding grounds and/or passageway for a number of wildlife, bird and aquatic species. The following information was derived from several sources; much of the detailed information pertaining to the Proposed Action areas has been extracted from the 2001 *Integrated Natural Resources Management Plan* (INRMP) or is tiered from existing NEPA documentation such as the *Programmatic Environmental Assessment for Land Clearing Activities* (February 2005). Biological resources covered in this section include native and non-native vegetation communities and special-status species. Special-status species include Species of Special Concern (SSC), and Threatened and Endangered (T&E) species. Information on the biological aspects of Essential Fish Habitat (EFH), with emphasis on manatee protection are included separately here for analysis of potential impacts to applicable areas on CCAFS.

3.2.1 Vegetation and Wildlife Communities on CCAFS

Activities for the proposed action would primarily occur in the Trident Turning Basin, and immediately surrounding land. Security boat activities would be extended throughout the Port area and into the Atlantic Ocean.

3.2.1.1 Invasive Species

Most of the areas on CCAFS that are disturbed, including roads, utility corridors, and launch complexes, include a robust invasive species component. Brazilian pepper is the most abundant invasive flora at CCAFS with six other invasive weeds present in lower densities. In addition, cogon grass, melaleuca, mistletoe (*Phoradendron serotinum*), and small populations of thistles (*Cirsium* spp.) and nettles (*Urtica* spp.) are present (Invasive Plant Species Control Plan for CCAFS, 2004).

Brazilian pepper is found throughout the ROI. As seen in Figure 3-1, Brazilian pepper is located along the shoreline in the Trident Turning Basin, and along the route of the proposed security access road.

Figure 3-1: Vegetation Communities on CCAFS

3.2.1.2 Vegetation and Wildlife

The ROI primarily consists of shoreline areas (Figure 3-1). The shoreline receives the most direct influence from the coastal processes of erosion and deposition. The area intended for the new ramp, located inside the Trident Basin, is primarily grass with rock revetment. The security activities would require boat operations in other areas of the Port as well as the Atlantic Ocean.

The topographic position of natural communities on CCAFS reflects the various erosional and depositional processes of coastal land formation. Generally, older communities are found on the western margin of the Canaveral Peninsula, along the Banana River; newer and successional communities are forming along the eastern coast. For more detailed information on vegetation communities and wildlife found on CCAFS, refer to the 2001 *Integrated Natural Resources Management Plan* and the *Programmatic Environmental Assessment of Land Clearing Activities* (2005).

The rock outcrops in the ROI provide for the development of ecological communities of macroalgae and invertebrate grazers that provide important foraging for juvenile turtles and fish. These EFH areas include the rock revetment, as well as areas along the shoreline. The bottom communities in the ROI are sparse and of low diversity. For a more detailed discussion on EFH found in the ROI, please refer to Section 3.2.1.4.

3.2.1.3 Threatened and/or Endangered (T&E) Species

A large number of Federal and State-listed T&E Species, as well as SSC, could utilize the ROI in the Trident Turning Basin as well as the proposed location for the security access road and shelter in the Proposed Action area. State-listed plant species that have been found on dunes at CCAFS are coastal vervain (*Glandularia maritima*), beach star (*Remirea maritima*), and sea lavender (*Tournefortia gnaphalodes*). Refer to the *Programmatic Environmental Assessment of Land Clearing Activities* (2005) for a more complete discussion of T&E plants that are found on CCAFS, along with the status of each.

Several rare animal species are also documented on CCAFS beach dunes. The southeastern beach mouse inhabits beach dunes and adjacent communities. A colony of least terns has been documented to nest on CCAFS beaches. Black skimmers have also been documented nesting on the beach. Beaches on CCAFS are also very important nesting habitat for two species of sea turtles, the Atlantic green sea turtle and loggerhead turtle. There have also been documented nestings by the endangered leatherback turtle.

Florida Manatee

The federally listed endangered Florida manatee is known to inhabit the Port area and adjacent Banana River. Sightings have shown consistent tendencies of the animals to use near-shore waters where Submerged Aquatic Vegetation may grow or where channels provide immediate deep water or freshwater access. In June 2004, the FWCC approved new boat speed zones to protect manatees in Brevard County. Manatees are found throughout the port area, particularly in the Trident Basin.

Sea Turtles

Federally listed sea turtle species that nest on the adjacent beaches include the loggerhead, green and leatherback. While sea turtles spend much of their lives in the ocean, females come ashore each year to nest. Research has shown that females will avoid highly illuminated beaches and postpone nesting. Artificial lights have also resulted in hatchling mortality as disoriented hatchlings move toward these light sources rather than the ocean. In 1988, in compliance with Section 7 of the Endangered Species Act, the U.S. Air Force developed Light Management Plans (LMPs) for various areas and facilities on CCAFS to protect sea turtles. A Biological Opinion issued by the USFWS on 9 April 1990, and updated on 2 May 2000, requires that all new facilities develop a LMP. In addition, the AF created 45th Space Wing Instruction (SWI) 32-7001, *Exterior Lighting Management,* which implements the Biological Opinion and explains management responsibilities necessary for the 45 SW to remain in compliance with the Biological Opinion.

In the ROI, a population (approximately 50) of juvenile green sea turtles inhabits the CCAFS Trident Turning Basin and adjacent nearshore waters. An on-going study, initiated by University of Central Florida (UCF) in 1993, utilizes mark/recapture methodologies to examine size class composition and condition of this juvenile green turtle population. This study also assesses stomach contents, potential impacts to this population from CCAFS operations, such as fishing, and provides species/habitat management recommendations in accordance with the ESA. In addition, radio-telemetry techniques have been utilized to identify turtle movements within the port area and potential migration to adjacent habitats. This study is programmed to continue for several years.

Algal growth is a food source for juvenile green sea turtles. The rock revetment, located at the proposed site of the boat ramp, contains algal growth. The rock revetment provides the algal growth for juvenile green sea turtles found in the Trident Basin However, the rock revetment would be removed for construction of the new boat ramp therefore eliminating some of the food source for the turtles.

Atlantic loggerhead sea turtles are occasionally seen in the Trident Basin as well as other areas of the port. Atlantic loggerhead turtles are listed as a threatened species by FWS.

Smalltooth Sawfish

Sawfish species inhabit shallow coastal waters of tropical seas and estuaries.. They are usually found in shallow waters very close to shore over muddy and sandy bottoms.

Smalltooth sawfish have been reported in both the Pacific and Atlantic Oceans, but the U.S. population is found only in the Atlantic. The U.S. population is common along the east coast from Florida to Cape Hatteras. The current range of this species has contracted to peninsular Florida.

The smalltooth sawfish is very rare in the area and is unlikely to occur at the project site.

Gopher Tortoise

The gopher tortoise is listed as a Species of Special Concern in the State of Florida. Although the gopher tortoise is not federally protected in Florida, it is afforded protection by the AF due to its state ranking and the communal use of its burrow by other federally protected species (the Eastern indigo snake). The primary reason for the decline of this species throughout the southeast is habitat loss. Gopher tortoises are likely to occur within the proposed area along the proposed security access road and shelter (Figure 3-2).

The gopher tortoise is a relatively large (carapace length up to 1.2 feet) terrestrial turtle that is active year round but spends a limited amount of time above ground. The gopher tortoises occur in habitats with a well-drained sandy substrate, ample herbaceous vegetation for food, and sunlit areas for nesting. Gopher tortoises are highly fossorial, construct burrows that average 15 feet long, and 6 feet deep, where they spend much of their time. The burrows provide protection from predators, fire, and the weather. The burrow is also an important habitat to scores of other native species. Some species observed utilizing burrows on CCAFS include the eastern diamondback rattlesnake, eastern coachwhip, ghost crabs, box turtle, cotton mouse, and armadillo.

Nesting occurs from late April to mid-July. Clutches, averaging five to six eggs, hatch from August through September. Nests may be located in any open sunny area near the burrow of the female, but are most often found in the spoil mound immediately outside the female's burrow. Adult females produce one clutch per year, with some adults not nesting every year.

Eastern Indigo Snake

The longest of the North American snakes (up to 8.6 feet), the Eastern indigo snake is locally abundant in parts of Florida, but as a top carnivore, population densities are typically low. The Eastern indigo snake has been found on CCAFS and likely occurs throughout the station. This primarily diurnal snake is know to occur in most types of habitat and is often associated with gopher tortoise burrows, which it occupies when inactive. The reproductive season encompasses copulation (November through April), egg laying (May through June), and hatching (late July through October). Major threats to the indigo snake on CCAFS are habitat loss and vehicle traffic. The Eastern indigo snake could occur within the proposed project area.

Southeastern Beach Mouse

The Southeastern beach mouse is a subspecies of the widely distributed beach mouse (*Peromyscus polionotus*). Originally occurring on coastal dunes and coastal strand communities along the Atlantic coast of Florida, the Southeastern beach mouse is presently known to occur in six sites in Brevard, Indian River, and St. Lucie Counties. Most breeding activity occurs November through January, and females can produce two or more litters per year, with litters averaging 3 to 4 young. The extirpation of the Southeastern beach mouse from most of its historical range is a result of human development of the coastal barrier islands.

The most viable populations of this species of mouse are now present only at Canaveral National Seashore, KSC, and CCAFS. CCAFS is the only remaining unfragmented

section of coastal dune and strand that still supports large numbers of the Southeastern beach mouse. The Southeastern beach mouse has been observed in coastal scrub on CCAFS. Recent surveys indicate that the Southeastern beach mouse could be present in and/or around the proposed site, particularly along the beach areas.

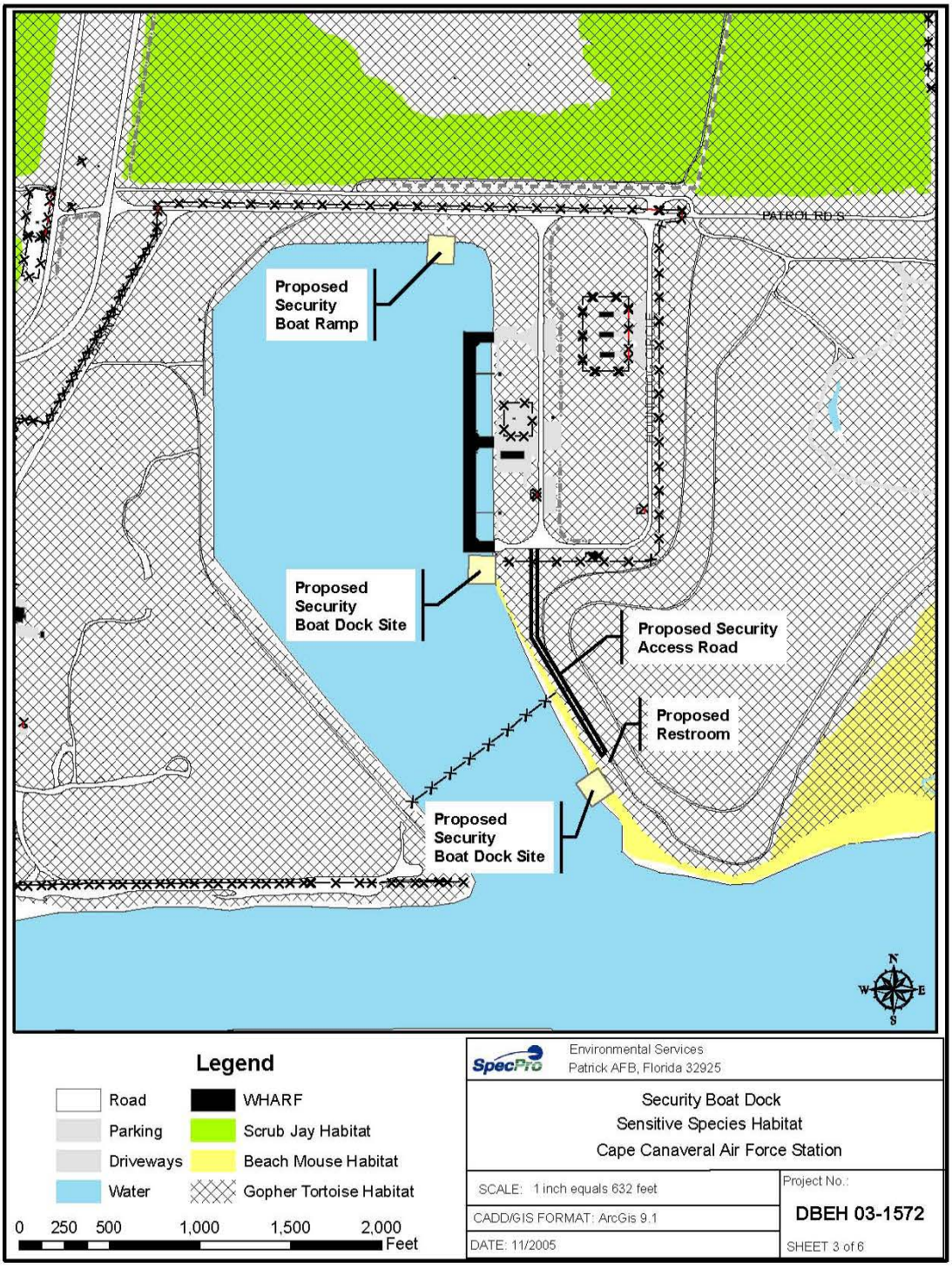

Figure 3-2: Sensitive Species Habitat in the Proposed Action Area

3.2.1.4 Essential Fish Habitat (EFH)

Federally funded projects or projects occurring on Federal property are required to address EFH requirements, as mandated by the 1996 amendments to the Magnuson-Steven Fishery Conservation and Management Act (MSFCMA). Essential fish habitat can generally be defined as the waters and substrates necessary to fish for all stages of their life cycle. Regional Fishery Management Officials (FMCs) are responsible for designating EFH in their management plans for all managed species with the Exclusive Economic Zone (EEZ), which is a managed fisheries area that extends from the shoreline to 200 miles offshore along the coastline of U.S. waters. For the marine area surrounding CCAFS, the South Atlantic Fishery Management Council (SAFMC) is the managing body. The SAFMC currently manages for several types of organisms in the vicinity of Cape Canaveral: The South Atlantic Snapper-Grouper complex, South Atlantic shrimps, Coastal Migratory Pelagic species, Highly Migratory species, Red Drum, Spiny Lobster, Golden Crab, Calico Scallop and Sargassum.

In addition to EFH designations, Habitat Areas of Particular Concern (HAPCs) have been designated within areas of EFH. HAPCs are localized areas that are vulnerable to degradation or are especially important ecologically. They are identified by fishery management councils and conservation priorities are set for these areas because they play important roles in the life cycles of federally managed fish species. The SAFMC has designated areas within the vicinity of Cape Canaveral as EFH-HAPCs for the species within its jurisdiction: penaeid and rock shrimp, red drum, snapper-grouper species complex, coastal migratory pelagic species, *Sargassum*, and live/hard bottom habitat.

Essential fish habitat for the snapper-grouper species complex includes coral reefs, live/hard bottom habitats, submerged aquatic vegetation, artificial reefs, and medium to high profile outcroppings on and around the shelf break zone from shore to at least 600 feet (at least 2000 feet for wreckfish). Included as EFH is the spawning area above the adult habitat and the additional pelagic environment, including *Sargassum*.

Areas inshore of the 100-foot contour, estuarine emergent vegetated wetlands, tidal creeks, estuarine scrub/shrub, oyster reefs and shell banks, unconsolidated bottom (soft sediments), artificial reefs, coral reefs, and live/hard bottom habitats are also EFH for specific life stages of estuarine-dependent and nearshore snapper-grouper species. Essential fish habitat for penaeid shrimp includes inshore estuarine nursery areas (these are also designated as HAPCs), offshore marine habitats used for spawning and growth to maturity, and interconnecting water bodies. Essential fish habitat for rock shrimp consists of offshore terrigenous and biogenic sand bottom habitats found at depths of 58 to 582 feet. Essential fish habitat also includes the shelf current systems near Cape Canaveral, which provide major transport mechanisms affecting planktonic larval rock shrimp. The Oculina Bank HAPC may serve as nursery habitat and provide refuge for rock shrimp.

Essential fish habitat for coastal migratory pelagic species includes sandy shoals and offshore bars, all coastal inlets, designated nursery habitats, and high profile rocky bottom and barrier island ocean-side waters. This extends from the surf to the shelf break zone from the Gulf Stream shoreward, including *Sargassum*.

The NMFS considers all waters of the Port, including the Trident Basin, EFH. Specifically in the Proposed Action area, rock outcrops and the gravel revetment provide habitat for macroalgae and invertebrate grazers that provide foraging for juvenile turtles and fish. However, the remaining areas are clear of any coral, coral reef, live/hard bottom or artificial reef habitat. Generally, any bottom communities are of low diversity and sparse due to the dynamic nature of the location. Therefore, although the Proposed Action area is located in EFH, it is not considered a HAPC.

3.2.1.5 CCAFS Wetlands and Floodplains

Wetlands are the transition zones between dry upland ecosystems and deeper aquatic habitats. Each wetland area is unique according to its surrounding geologic, hydrologic, and climatic conditions. Wetlands provide flood control, aquifer recharge, coastal protection, and act to help filter pollutants from the ecosystem. Wetlands often support a wide range of rare and endangered aquatic plants and wildlife and will be discussed in the appropriate 45 SW asset area as applicable. Within the two major categories of wetlands (estuarine and freshwater), several types of wetland environments are found throughout CCAFS. According to NWI, the sandy shoreline is considered an estuarine wetland; therefore, the docks would be located in a wetland (Figure 3-3).

A floodplain is the lowland adjacent to a river, lake, or ocean. Floodplains are designated by the frequency of the flood that is large enough to cover them. Flood frequencies, such as the 100-year flood, are determined by plotting a graph of the size of all known floods for an area and determining how often floods of a particular size occur. Issues related to floodplains on the 45 SW assets discussed in this document will be addressed in the following sections as appropriate. The proposed boat dock and ramp would be located in the 100-year floodplain, and the proposed shelter and access road are located in the 500-year floodplain(Figure 3-3).

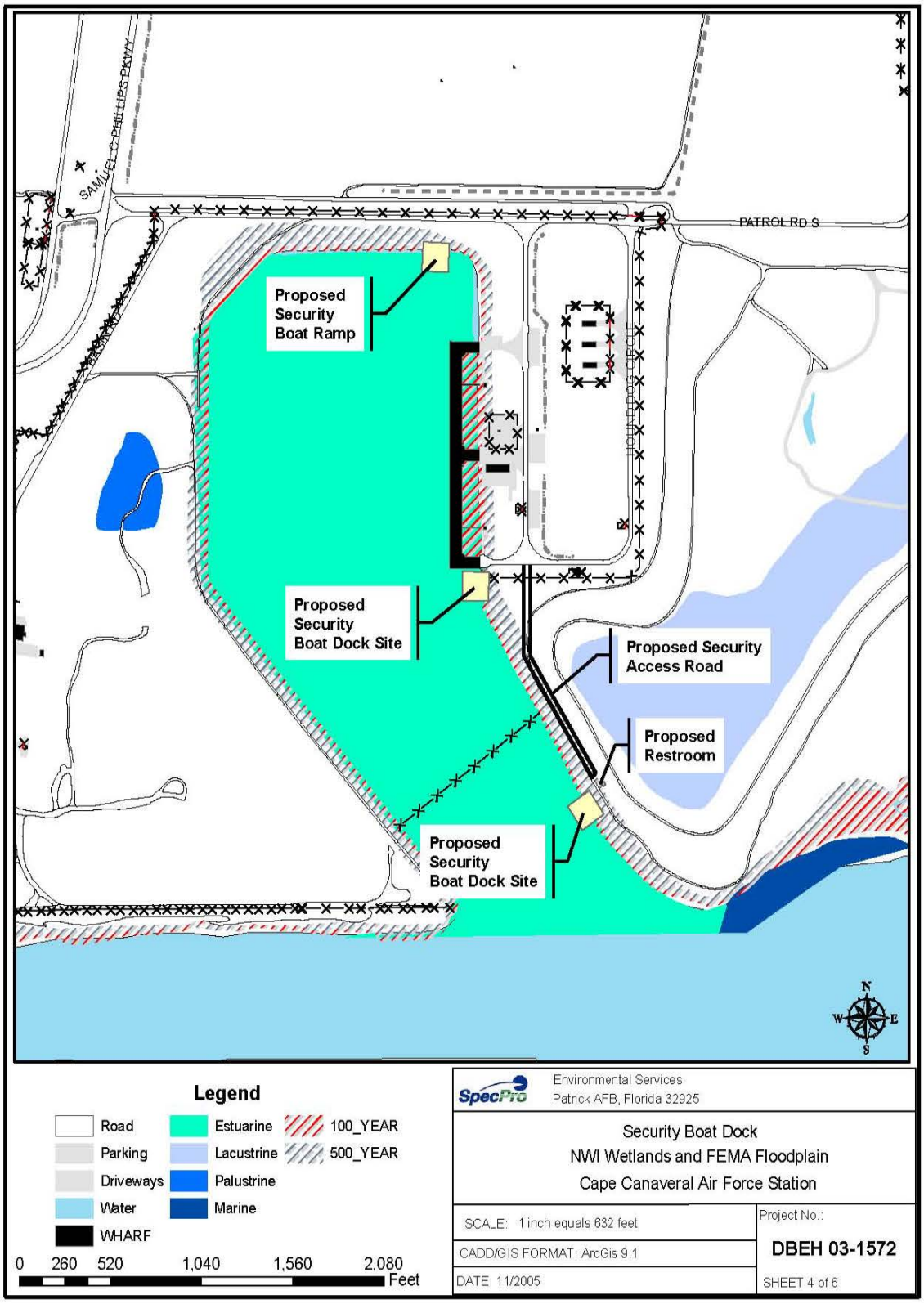

Figure 3-3: Wetlands and Floodplains located at the Proposed Action Area

4.0 ENVIRONMENTAL CONSEQUENCES

This Chapter describes the potential environmental consequences of the project activities. Components of the affected environment that are of greater concern are described in greater detail.

Federal, State, and local environmental laws and regulations were reviewed to assist in determining established thresholds for assessing environmental impacts (if any) in fulfillment of NEPA requirements. Proposed activities were evaluated to determine their potential to result in significant environmental consequences using an approach based on the interpretation of significance outlined in the CEQ regulations for implementing the procedural provisions of NEPA (40 CFR 1500-1508) and 32 CFR 989, *The Environmental Impact Analysis Process* (2003).

Guidelines established by the CEQ (40 CFR 1508.27) specify that significance should be determined in relationship to both context and intensity (severity). The assessment of potential impacts and the determination of their significance are based on the requirements in 40 CFR 1508.27. Three levels of impact can be identified:

- No Impact - No impact is predicted
- Not Significant Impact - An impact is predicted, but the impact does not meet the intensity/context significance criteria for the specific resource
- Significant Impact - An impact is predicted that meets the intensity/context significance criteria for the specific resource

Factors contributing to the intensity or severity of the impact include the following:

- The degree to which the action affects public health or safety;
- Unique characteristics of the geographic area such as proximity to cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas;
- The degree to which effects of the action on the quality of the human environment are likely to be highly uncertain or controversial;
- The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration
- Whether the action is related to other actions with individually insignificant, but cumulatively significant impacts;
- The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed or eligible for listing on the NRHP, or may cause loss or destruction of significant scientific or cultural resources;
- The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the ESA; and

- Whether the action threatens to violate a federal, state, or local law or requirements imposed for environmental protection.

Thresholds for determining impact significance are based on the applicable compliance standard. When feasible, these criteria correspond to federal- or state-recognized criteria, and are determined using the associated standardized methods. In the absence of a compliance standard, the thresholds are based upon a federal- or state-recommended guidance or professional standards/best professional judgment.

4.1 Water Resources

This section describes the potential effects to surface water and ground water including water quality, resulting from the implementation of the Proposed Action and the No-Action Alternative.

4.1.1 Preferred Alternative

The ROI for water resources in the project areas includes the Trident Turning Basin. The potential for run-off and transport of sediment into surface waters exist when land is disturbed. Demolition/construction activities for the Proposed Action would be expected to have negligible effects on local water quality.

Under the Proposed Action, a variety of construction methods, including but not limited to augering and jetting, would be employed to build new structures. To minimize turbidity during jetting/augering for piling burial, a sediment boom would be used to minimize impacts to water quality. However, this disturbance is not likely to have any lingering effects on wildlife, habitat, or aesthetics.

Occasional spills on surface waters associated with the Proposed Action activities may occur. Spills into these surface waters have the potential to impact sea turtles and manatees, both Federally protected species. To date, spills in these locations have consisted of relatively minor petroleum waste and product releases resulting in minimal environmental damage. No known mortality of endangered species has occurred due to spills. Spill response teams available through the U.S. Coast Guard, the Joint Base Operation Support Contractor, and commercial sources located at Port Canaveral are capable of cleaning up most potential spill incidents at CCAFS wharf facilities. The increased activity of boats in these areas could slightly decrease water quality from inadvertent gasoline spillage and oil leakage. This decrease in water quality would be minor since spilled substances would quickly dissipate.

Generally, any bottom communities in the ROI are of low diversity and sparse due to the dynamic nature of the location. No significant impacts are anticipated to EFH.

Land disturbance activities during the construction of the road and concrete shelter have the potential to accelerate erosion. Prior to and during such activities, erosion and sediment control measures would be designed and implemented to retain sediment on-site and prevent violations of State and Federal water quality standards. Any erosion or shoaling that could cause adverse impacts to water resources would be mitigated by implementing BMPs.

A Joint Application Environmental Resource Permit processed by the U.S. Army Corps of Engineers (USACE), FDEP, and St. Johns River Water Management District (SJRWMD) would be required for the Proposed Action activities.

No impact to groundwater would be anticipated from the Proposed Action activities.

4.1.2 No-Action Alternative

Under the No-Action Alternative, no changes to the water quality are proposed, and no construction or modification of facilities would occur; therefore, no impacts to water resources would be expected.

4.2 Biological Resources

The AF is committed to the long-term management of all natural areas on its installations, as directed by AFI 32-7064, *Integrated Natural Resources Management*. Long-term management objectives are identified in the 45 SW's 2001 *INRMP* with specific land-management objectives identified in the Sea Turtle Management Plan located in the appendices of the *INRMP*.

4.2.1 Proposed Action

Table 4-1 identifies specific regulatory requirements that would minimize impacts to biological resources.

Table 4-1: Regulatory Requirements for Biological Resource Impact Minimization

Title of Law or Rule	Purpose of Law or Rule	Required Action/Mitigative Measure(s) to Achieve Compliance	Responsible Agency or Organization
45th Space Wing (45 SW) Instruction 32-7001	Reduce the amount of exterior lighting visible from the beach during the sea turtle nesting season (1 April – 31 October) from 21:00 to 06:00 to reduce sea turtle hatchling mortality caused by disorientation.	Use low-pressure sodium (LPS) lighting fixtures or shield high pressure sodium lights	45 SW
Migratory Bird Treaty Act	Consultation with USFWS as necessary and compliance with applicable permits.	Prohibits pursuing, taking, or killing migratory birds or destruction of the eggs or nest of migratory birds without a permit.	USFWS
Endangered Species Act (ESA)	Conserve ecosystems that support T&E species. Section 7 requires federal agencies to ensure that any action authorized, funded or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat. Comply with existing T&E permits.	Consultation with U.S. Fish and Wildlife Service (USFWS) and if necessary, obtain and comply with biological opinions/incidental take permits Consultation with NMFS for impacts to sea turtles in the water.	USFWS & NMFS

Title of Law or Rule	Purpose of Law or Rule	Required Action/Mitigative Measure(s) to Achieve Compliance	Responsible Agency or Organization
Executive Orders (EOs) 11988 and 11990	Minimize the destruction, loss, or degradation of wetlands, and preserve and enhance the natural and beneficial values of wetlands. Reduce the risk of floodplain loss, minimize the impact of floods on human safety, health and welfare, and restore and preserve the natural and beneficial values served by floodplains. Consider alternatives to avoid adverse effects in the floodplains. If the only practicable alternative requires siting in a floodplain, design or modify Proposed Action to minimize potential harm to or within the floodplain.	Finding Of No Practicable Alternative if wetlands or floodplains would be impacted	Department of Defense (DoD)
EO 13112	Prevent the introduction of invasive species and provide for their control and minimize spread. Control the economic, ecological, and human health impacts that invasive species cause.	Remove and control invasive species	DoD
Florida Endangered Species Protection Act	Prohibits the intentional wounding or killing of any fish or wildlife species designated as "endangered", "threatened" or of "special concern" and intentional destruction of their nests.	Consultation with Florida Fish and Wildlife Conservation Commission (FFWCC)	FFWCC
Florida Endangered and Threatened Species Act (FETSA)	Establishes the conservation and wise management of T&E species as State policy.	Consider impacts to T&E species when planning and implementing projects	FFWCC
Magnuson-Stevens Fishery Conservation and Management Act (Sustainable Fisheries Act)	Identify EFH and threats to EFH.	Ameliorate threats to Essential Fish Habitat (EFH) from non-fishing activities and consult with National Marine Fisheries Service (NMFS)	NMFS
Florida Manatee Sanctuary Act	Established Manatee speed restriction zones to reduce injuries and deaths of manatees.	Reduce threats to manatees by complying with restrictions	FFWCC

Title of Law or Rule	Purpose of Law or Rule	Required Action/Mitigative Measure(s) to Achieve Compliance	Responsible Agency or Organization
Marine Mammal Protection Act	Prohibits harassing or killing any marine mammal. Harassment is any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine mammal stock in the wild; or has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption or behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.	Maintain distance requirements from marine mammals	NMFS
Preservation of Native Flora of Florida Act	Prohibits willfully destroying or harvesting T&E species and "commercially exploited" plants	Avoid impacts to T&E and "commercially exploited" plants	Florida Department of Agriculture and Consumer Services (FDAS)

4.2.1.1 Invasive Species

Project activities would generally occur on previously disturbed and developed land. Any exotic, invasive vegetation encountered (such as Brazilian pepper or Australian pine) must be properly treated onsite in accordance with the guidelines set forth in the 2005 Land Clearing PEA, and all landscaping must be approved by 45 CES/CEV. Native, coastal, salt tolerant vegetation would be used as much as practicable.

4.2.1.2 Vegetation and Wildlife Communities

The 45 SW is exempt from requirements dictated by the implementation of the Brevard County Manatee Protection Plan based on consultation with the Brevard County Natural Resources Office. Consultation has also been completed with USFWS on the necessity of sea grass surveys at CCAFS, and no surveys will be required.

Noise rather than the sight of machines appears to cause disturbance to wildlife. The combination of increased noise levels and human activity would likely cause temporary displacement of some animals that forage, feed, nest, or have dens within a 15-meter radius (or greater for more sensitive species) of noise sources. Direct mortality of slow-moving or nesting animals could occur because of project actions (*e.g.*, excavation of burrows or removal of nests during construction).

In order to avoid attracting wildlife to the work site, the contractor would keep the construction area, including storage areas, free from accumulation of waste materials or rubbish at all times. All waste materials, except indicated salvaged items with ACM, generated by demolition activities would be hauled off at the end of each workday and disposed. Upon completion of the demolition, the contractor would leave the work site in a clean and neat condition, satisfactory to the Contracting Officer.

The presence of floating boat slips may produce minor beneficial effects for aquatic organisms by providing additional coverage and shade and providing a surface for organisms to attach.

No significant impacts are anticipated to vegetation or wildlife in the Proposed Action area.

4.2.1.3 Threatened and Endangered Species

Accidental spills into waters near the project activities have the potential to impact sea turtles and manatees, both Federally protected species. To date, spills in these locations have consisted of relatively minor petroleum waste and product releases resulting in minimal environmental damage. No known mortality of endangered species has occurred due to spills. Spill response teams available through the U.S. Coast Guard, the J-BOSC, and commercial sources located at Port Canaveral are capable of cleaning up most potential spill incidents at CCAFS wharf facilities.

Consultation with FWS has been completed to address impacts to sea turtles, considering lighting, in addition to impacts related to manatees, beach mice, and eastern indigo snakes, and consultation with NMFS has been completed to address impacts to sea turtles and fish in the water. Both agencies concur that no significant impacts are anticipated from the Proposed Action activities. Copies of the consultations can be found in Appendix B.

Florida Manatee

The Proposed Action would be located in habitat occupied by the federally-listed endangered Florida manatee. Boat collisions and loss of sea grass beds are both major threats to manatees.

Due to the nature of the construction activities conducted on CCAFS, and the proximity to the designated manatee critical habitat, the USAF would take particular consideration in areas where manatees are known to feed on aquatic vegetation.

The 45 SW consulted with the Brevard County Natural Resources Office, and determined that the Proposed Action is exempt requirements dictated by the implementation of the Brevard County Manatee Protection Plan. The FWS concurred with this determination. Furthermore, the following precautions would be taken: water depth adequacy for draft of vessels, no new dredging for boat docks, dock access not to exceed six foot width, manatee education and awareness sign posting for boat operators, no exposed reinforcement structures on floating dock, and allowance of only one powerboat per 100 feet of congruous linear shoreline.

The 45 SW has completed consultation with the USFWS because this project has the potential to impact manatees, and requires Section 7 Consultation. The FWS concurred with the 45 SW that no significant impacts are anticipated to the manatees.

Sea Turtles

Sea turtle nests have been identified along the shorelines of CCAFS; therefore, the shoreline from mean low water to a line just behind the leading dune is considered protected habitat for all species of sea turtles. Direct impacts to sea turtles or their nesting habitat, primarily beaches, are not anticipated. However, research has

demonstrated that females will avoid highly illuminated beaches and therefore postpone nesting (Witherington, 1992). Likewise, disorientation (loss of bearing) has caused hatchling mortality, as the confused hatchlings move towards artificial light sources and dunes instead of the ocean.

In areas where construction activities would occur adjacent to shorelines, artificial lighting effects would be assessed to determine if artificial lighting is anticipated to effect turtle nesting. Research shows that various types of lights affect sea turtles to varying degrees, with Low Pressure Sodium (LPS) lamps (589-590 nanometers in wavelength) having the least effect on sea turtles. These types of lamps would be placed for the lights needed for the concrete shelter building at CCAFS. Alternately, artificial lighting may be controlled with another appropriate method as identified in 45 SW Instruction 32-7001.

A small section of rock revetment would be removed for construction of the boat ramp inside the Trident Basin. Green sea turtles in particular may occasionally be present in the turning basin where they graze on the algae and other epibionts growing on the existing docks and rock rip-rap that surround the inside of the basin. Algal growth on the rock revetment serves as a food source for juvenile green sea turtles in the basin. The area for the ramp is the only foraging area that would be impacted and this would be an area approximately 20 feet in length. given that only a small portion of rock revetment will be removed and other sources of EFH are available within the Trident Turning Basin in addition to the precautions that will be implemented during the project, no significant impacts are anticipated.

Impacts from construction and operation would not be expected. Construction personnel would survey the area each day and allow time for any turtles to move out of the construction area. Personnel operating water crafts would be aware of the presence of T&E species in the water and avoid impact and would maintain no wake in the basin.

Ideally, construction activities would be conducted outside of dark hours during the sea turtle nesting season (1 May-31 October). Removing all materials from aquatic habitats and reducing speeds in areas that may contain turtles would minimize in-water threats, including entanglement in debris and gear, ingestion of debris, and boat strikes.

The FWS has concurred with the 45 SW declaration that no significant impacts are anticipated to the sea turtles.

Gopher Tortoise

When activities are likely to disturb gopher tortoise burrows, 45 SW biologists will relocate tortoises to other suitable areas on CCAFS. Biologists would move tortoises approximately one month (weather permitting) prior to ground disturbance to ensure tortoises do not move back and re-populate the area. All tortoise relocation will be completed in accordance with the Gopher Tortoise Relocation Permit (WR01103), issued to the USAF. This permit allows natural resource managers to relocate up to 150 tortoises during a three-year period. Trapping is conducted by experienced personnel and in accordance with required State permits for these types of activities. Although rare, tortoises have been injured or killed during backhoe operations. If a tortoise is injured during relocation activities, it will be transported immediately to a licensed local wildlife rehabilitator or veterinarian experienced in treating injured tortoises. If injured or

killed, the FWCC will immediately be notified. Tortoises held overnight will be kept isolated from one another to prevent the spread of Upper Respiratory Tract Disease (URTD). Animals will be handled briefly and gently to reduce harm or stress to the animal. The USAF is required to submit a report for each relocation project.

If a proposed activity will occur near tortoise habitat, but individual burrows will not be disturbed, natural resource personnel will stake off the area that must be avoided and provide tortoise informational posters. These posters will educate contractors working in the area so they may learn the characteristics of a tortoise and burrow, as well as whom to contact if they should come across either during project activities.

Although never observed on 45 SW properties, slow moving gopher tortoises could be run over by heavy equipment performing cutting activities. Concerns regarding heavy equipment collapsing and entombing tortoises during routine cutting activities has been dismissed based on studies by the Fish and Wildlife Conservation Commission (FWCC) (Joan Berish, pers. comm.).

No significant impacts are anticipated to Gopher tortoises.

Eastern Indigo Snake

Most indigo snakes leave construction areas once activities begin and any encountered are to be left alone and permitted to leave on their own. The only time indigo snakes may be relocated is during relocation of gopher tortoises. In accordance with the USAF Gopher Tortoise Relocation Permit, no more than one indigo snake encountered may be relocated. Should additional specimens of this species be encountered, the capture operation is suspended and the FWCC office in Tallahassee contacted for instructions. Consultation with FWS has addressed potential impacts from construction activities to indigo snakes, and FWS has concurred that no significant impacts are anticipated.

Southeastern Beach Mouse

The Proposed Action area is located in habitat that may be occupied by the Southeastern beach mouse. It is possible that the Proposed Action activities could create openings that would not only create beach mouse habitat, but also create corridors in which this species could move between suitable habitats. Potential impacts to beach mice were addressed through consultation with FWS, and they have concurred that no significant impacts are anticipated.

Smalltooth Sawfish

Although the Proposed Action area is located in habitat that may be occupied by smalltooth sawfish, it is unlikely that they occur at the project site. Potential impacts to smalltooth sawfish were addressed through consultation with NMFS, and they have concurred that no significant impacts are anticipated.

4.2.1.4 Essential Fish Habitat

The ROI does not have any coral, coral reef, live/hard bottom or artificial reef habitat, and has been previously disturbed by Port activities. Furthermore, the sediments are typically coarse and the bottom communities are low diversity reflecting the dynamic

nature of this area. Macroalgae and invertebrate grazers found on rock outcrops that provide foraging for juvenile turtles in the ROI would not be affected by the Proposed Action activities. However, the rock revetment in the northeast corner of the basin that contains algal growth would be removed and replaced by a concrete ramp. The removal of this food source is considered minimal, and no significant impacts are anticipated to EFH. The AF has initiated consultation with the NMFS for concurrence that the Proposed Action will not adversely impact EFH.

4.2.1.5 Wetlands and Floodplains

The Proposed Action would result in construction of a new boat dock and concrete shelter building just outside and to the south of the Trident Turning Basin, and reconstruction of the existing boat dock in the Trident Turning Basin at CCAFS. These activities would occur along the sandy shoreline that has limited vegetation and is considered an estuarine wetland. The area of construction for the new boat ramp is a previously disturbed area in the northeast corner of the Trident Basin that contains rip-rap at depth offshore for stabilization. The docks and ramp are located within the 100-year flood zone, and the proposed access road and shelter are located in the 500-year flood zone. However, due to nature of the requirements for the Proposed Action, all Proposed Action activities must occur in the wetlands and flood zone. Boats will not be permanently moored at the docks, but will be re-positioned to other areas as dictated by operations. During storms/hurricanes, the boats will be lifted out of the water and placed in a protected area elsewhere on CCAFS. No significant impacts are anticipated to floodplains or wetlands.

4.2.2 No-Action Alternative

Under the No Action Alternative, the Proposed Action would not occur and modified/new structures would not be constructed. No impacts to biological resources would be anticipated as a result of the No Action Alternative.

4.3 Conflicts with Federal, State, or Local Land Use Plans, Policies, and Controls

The Proposed Action alternatives would have no impact on existing land use and presents no conflicts with Federal, regional, state, or local land use plans, policies, or controls.

4.4 Energy Requirements and Conservation Potential

Anticipated energy requirements of the Proposed Action could be accommodated within the energy supply of the region. Existing energy sources are considered adequate to meet the requirements of the Proposed Action.

4.5 Natural or Depletable Resource Requirements and Conservation Potential

Other than the use of building materials and construction vehicle fuels for demolition and construction activities, no significant use of natural or depletable resources is required by the Proposed Action.

4.6 Irreversible or Irretrievable Commitment of Resources

Although the Proposed Action would result in some irreversible and irretrievable commitment of resources such as fuel, and labor, this commitment of resources is not significantly different from that necessary for regular activities taking place on the Installation in general.

4.7 Adverse Environmental Effects that Cannot be Avoided

Adverse environmental effects from the Proposed Action that cannot be avoided include construction-related emissions of fugitive dust and exhaust products; temporary displacement of wildlife during construction due to noise and construction activities; some destruction of existing vegetation; and sediment runoff into surrounding areas during construction activities. However, through implementation of the program actions and mitigation measures described within this document, these effects would be minimized.

4.8 Relationship Between Short-Term Uses of the Human Environment and the Maintenance and Enhancement of Long-Term Productivity

The Proposed Action would result in the construction of a new boat dock and concrete shelter building just outside and to the south of the Trident Turning Basin and reconstruction of the existing boat dock in conjunction with a security boat ramp at the northeast corner of the Trident Turning Basin, security access road and shelter all located at CCAFS. These actions would not eliminate any options for future use of the area.

4.9 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. Environmental Justice analysis need be applied only to adverse environmental impacts (USAF, 1997). Based on preliminary guidance provided by the Federal Interagency Working Group on Environmental Justice, adverse may be defined as "having a deleterious effect on human health or the environment that is significant, unacceptable, or above generally accepted norms." Adverse human health effects include bodily impairment, infirmity, illness, or death. Adverse environmental effects may include ecological, cultural, human health, economic, or social impacts when interrelated to impacts on the natural or physical environment.

The Proposed Action area is not located adjacent to minority populations or low-Income population centers, and indirect impacts to such communities located in the surrounding areas were not identified during the analysis of the Proposed Action. Therefore, the Proposed Action would not result in disproportionately high or adverse human health or environmental effects on minority or low-income populations. The Proposed Action alternatives would not substantially affect human health or the environment and would not exclude persons from participation, deny persons the benefits, or subject persons to discrimination because of their race, color, or national origin.

4.10 Cumulative Impacts Summary

Cumulative impact as shown in 40 CFR 1508.7 is "…the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

Potential cumulative impacts of the proposed project activities are evaluated by determining (1) whether the Proposed Action would have an impact on a given resource and (2) what is the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions.

Several other demolition/construction projects have been planned, such as the demolition of Space Launch Complexes 36 and 40 on Cape Canaveral Air Force Station (CCAFS). Cumulative contributions non-recyclable construction debris to the Brevard County landfill would occur. However, due to the relatively small amount of debris anticipated to be generated, the Proposed Action is not anticipated to result in cumulative impacts for any resource area examined in this document.

Additionally, no cumulative impacts are anticipated from the projected increase in water craft in Port waters. Safety precautions including slower boat speeds, awareness, and education will decrease the risks associated with increased number of water crafts.

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5.0 Conclusion

The AF conducted an assessment of the potential environmental consequences associated with the construction of a new boat dock, security access road and concrete shelter building just outside and to the south of the Trident Turning Basin; reconstruction of the existing boat dock in the Trident Turning Basin; and construction of a security boat ramp at the northeast corner of the Trident Turning Basin at CCAFS. This action is being proposed in order to provide an adequate and secure area for security boats at CCAFS. The only alternative considered to the Proposed Action was the No Action Alternative, in which new structures would not be constructed and the present ones would continue to be utilized.

No significant environmental impacts were identified that would require the completion of an Environmental Impact Statement. However, some less than significant and beneficial impacts were identified and are summarized below in Table 5-1, along with minimization measures and applicable regulatory guidance.

Table 5-1: Environmental Assessment Summary Matrix

Resource Category	Potential/Known Impact(s)	Minimization Measure(s) and Applicable Guidance
Air Quality	Short term impacts to air quality from particulate matter, CO, SO_2 and NO_x Potential releases of ACM	Follow Asbestos Management Plan. Restrict vehicle speeds for dust control.
Biological Resources	Direct impacts to native plant communities, T&E animals, and SSC	Survey and identify T&E animals and SSC and native habitats prior to activities. Stake off all areas of avoidance.
Biological Resources	Spread of invasive species	Follow Invasive Species Management Plan.
Biological Resources	Floodplain protection	Comply with EO 11988
Cultural Resources	Degradation of archeological resources	Cease project activities if human remains are unearthed and notify archeologist if artifacts are found.
Geology, Soils, and Water Resources	Soil erosion, siltation and pollution of surface waters	Obtain and comply with stormwater NPDES permit for activities that disturb 1 acre or more; implement BMPs.
Hazardous Materials/Waste	Disturbance of areas contaminated with hazardous materials/waste (heavy metal-containing paint, PCBs, asbestos, etc.) resulting in greater dispersal of contaminants	Follow OPLANs 19-14 and 19-16 when working with and disposing of hazardous wastes. Coordinate with 45 SW and use Personal Protective Equipment (PPE).
Health and Safety	Safety issues regarding handling, transporting, and disposing of hazardous materials and wastes	Remove asbestos prior to demolition activities and leave paints in-place to reduce potential exposure to heavy metals.
Land Use and Zoning	CMZA compliance	Project subject to Federal consistency review and determination.
Infrastructure and Transportation	Potential damage to underground utilities from heavy equipment Impacts to landfills from demolition debris	Obtain dig permit prior to ground disturbance. Recycle wood, metals, concrete, and other materials whenever possible.
Noise	Short-term noise impacts to workers and surrounding personnel	Use administrative or engineering controls and PPE where necessary.

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6.0 DOCUMENTATION CITED

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APPENDIX A

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

FORM 813

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REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol RCS: DBEH 03-1572

INSTURCTIONS: *Section I to be completed by Proponent: Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).*

SECTION I - PROPONENT INFORMATION

1. TO (Environmental Planning Function)	2. FROM (Proponent organization and functional address symbol)	2a. TELEPHONE NO.
45 CES/CEV	Space Gateway Support/SGS 5500	476-2373

3. TITLE OF PROPOSED ACTION
Construct Security Boat at Trident and Poseidon Wharfs

4. PURPOSE AND NEED FOR ACTION *(Identify decisions to be made and need date)*
The purpose of the proposed action is to construct security boat docks at the Trident and Poseidon Wharfs. Security craft patrol the waters off the Poseidon Wharf, Port Canaveral main channel, Trident Wharf, (Cont. on page 2)

5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES *(DOPAA) (Provide sufficient details for evaluation of the total action.)*
The scope of work at the Poseidon Wharf includes the construction of a floating dock system, boat ramp and concrete shelter building. Scope of work at the Trident Wharf includes demolition of the existing dock (Cont. on page 2)

6. PROPONENT APPROVAL (Name and Grade)	6a. SIGNATURE	6b. DATE
Robert Schoolcraft, Civilian	//Signed//	9/4/03

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. *(Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effective; - = adverse effect; U = unknown effect)*	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE *(Noise, accident potential, encroachment, etc.)*	☐	☒	☐	☐
8. AIR QUALITY *(Emissions, attainment status, state implementation plan, etc.)*	☐	☒	☐	☐
9. WATER RESOURCES *(Quality, quantity, source, etc.)*	☐	☐	☐	☒
10. SAFETY AND OCCUPATIONAL HEALTH *(Asbestos/radiation/chemical exposure, explosives safety quantity-distance, etc.)*	☐	☒	☐	☐
11. HAZARDOUS MATERIALS/WASTE *(Use/storage/generation, solid waste, etc.)*	☐	☒	☐	☐
12. BIOLOGICAL RESOURCES *(Wetlands/floodplains, flora, fauna, etc.)*	☐	☐	☐	☒
13. CULTURAL RESOURCES *(Native American burial sites, archaeological, historical, etc.)*	☐	☒	☐	☐
14. GEOLOGY AND SOILS *(Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)*	☐	☒	☐	☐
15. SOCIOECONOMIC *(Employment/population projections, school and local fiscal impacts, etc.)*	☐	☒	☐	☐
16. OTHER *(Potential impacts not addressed above.)*	☐	☒	☐	☐

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. ☐ PROPOSED ACTION QUALIFIES FOR CATAGORICAL EXCLUSION (CATEX) # ; OR
☒ PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANAYLYSIS IS REQUIRED.

18. REMARKS
R² 20 May 04
See page 2.

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade)	19a. SIGNATURE	19b. DATE
E. ALEXANDER STOKES III, REM, GS-14 Chief, Environmental Flight	E. A. Stokes	24 May 04

AF FORM 813, AUG 93 *(EF-V1)* *(M.S. Word 97 form)* THIS FORM CONSOLIDATES AF FORMS 813 AND 814. PREVIOUS EDITIONS OF BOTH FORMS ARE OBSOLETE. PAGE 1 OF 3 PAGE(S)

AF FORM 813, AUG 93, CONTINUATION SHEET

AF Form 813
Page 2
DBEH 03-1572

4. Purpose and Need for Action (continued)

as well as offshore. Currently, security personnel utilize the same small dock in the Trident Basin for Air Force and Navy security boats with no space available to stage other necessary watercraft. Serious injuries have occurred because of the over crowded condition at the Trident Basin. Additionally, the existing dock at the Trident Basin is in dire need of repairs.

5. Description of Proposed Action and Alternatives (continued)

and construction of a new dock in its place.

Poseidon Wharf

Construct floating concrete dock system approximately 135' in length. Remove timber whaler on sea wall and construct 12' gate. Construct elevated pier walkway. Remove 22' fence and construct a boat ramp and 16' swing gate. Construct a 10' x 20' building. See attached site plan for location. Project will include area lighting and hook up to utilities.

Trident Wharf

Remove existing dock piling and ganging and dispose of. Install new concrete piles, construct new concrete floating dock (40' x 10') and gangway (35' x 5').

ALTERNATIVES:

Enlarge Trident Boat Dock to Accommodate More Boats – There is no room in the Trident Basin to accommodate the size of dock required; therefore, this alternative is not possible.

No Action – No dock exists to accommodate the number of craft security currently uses. Security requires a dock of sufficient space to stage watercraft during inclement weather and the Trident dock is not large enough. Injuries have occurred because of the over crowded condition. Due to these reasons, the no action alternative is not preferred.

18. Remarks

Activities involving regulated asbestos containing materials (RACM) must be performed in accordance with Asbestos NESHAP (40 CFR 61 Subpart M), 62-257, Florida Administrative Code, and 45 SW Asbestos Management OPLAN. CCAFS asbestos survey records are maintained at Facility 1638, Environmental Management.

Solid waste must be managed in accordance with the instructions set forth in the specifications of the contract. The Air Force supports the recycling of Construction and Demolition materials to the largest extent possible. If the contractor is directed to dispose of construction & demolition and/or asbestos containing materials in the CCAFS landfill, all requirements specified in the CCAFS Landfill Operations Plan must be met. The project contract monitor must make all arrangements with the landfill operator prior to any disposal activities, and must complete and sign a "Landfill Disposal Verification Form." No waste will be accepted prior to the completion of this form. Contact the CCAFS Landfill at 853-4672 for additional information. For off-site disposal activities, ensure that all materials are secured to prevent safety hazards during transport.

All projects must be designed to limit Air Force environmental liability. The Pollution Prevention Act of 1990, 42 U.S.C. §13101(b), established a National policy to prevent or reduce pollution at the source. Pollution prevention methods should be applied to all potential pollution generating activities. Project design engineers must consider the environmental implications of all projects during the design phase, develop designs that minimize or eliminate environmental liability, and perform a pollution prevention environmental analysis for the project early in the design phase. The analysis should focus on potential pollution that may result from the proposed project and must make recommendations that promote pollution prevention measures whenever feasible. Where pollution cannot be prevented, the environmental analysis must make

AF Form 813
Page 3
DBEH 03-1572

recommendations that promote recycling, energy recovery, treatment, and environmentally safe waste disposal practices. All construction and service contracts are required to comply with AFI 32-7086, Hazardous Materials Management.

Ensure all recyclable material (concrete, etc.) is recycled and report recycled quantities by weight to 45 CES/CEVC, Mr. Wayne Neville.

The Contractor and all Subcontractors involved in this project must comply with Air Force Affirmative Procurement (AP) requirements. AP is the purchase of environmentally friendly products and services (e.g., products made from recycled or recovered materials). Federal agencies, their contractors and subcontractors are required, whenever practicable, to maximize the purchase of materials containing minimum recycled or recovered materials content found on the list of "EPA Designated Guideline Items" according to RCRA 6002 and Executive Order 13101 (http://www.ofee.gov/eo13101/13101.htm). Prior to project closeout, the design engineer and the contractor must provide a report that describes the materials and quantities specified/used, or must provide a justification as to why designated guideline items were not utilized. AP requirements must also take consideration of life cycle costing, i.e., the cost of a product, including capital, installation, operating, maintenance, and disposal costs over the lifetime of that product.

Prior to and during construction, implement all erosion and sediment control measures (Best Management Practices) required to retain sediment on-site and to prevent violations of state water quality standards. Implement best management practices as necessary and correct any erosion or shoaling causing adverse impacts to water resources. Additionally, erosion and sediment control measures shall be initiated, as soon as practicable, in disturbed portions of the site where construction activities have permanently ceased or are temporarily on hold for at least seven days.

Permitting through several agencies (St. Johns River Water Management District, Army of Corps of Engineers, Florida Department of Environmental Protection) may be required. The proponent should ensure the proper amount of time be given (at least 90 days) to ensure proper permitting is completed.

The proposed action has the potential to impact threatened and endangered species; therefore, in accordance with Section 7 of the Endangered Species Act, consultation with the U. S. Fish and Wildlife Service must be completed by the Air Force prior to initiation of construction. In addition, due to the work in the water, consultation with the National Marine Fisheries Commission will be required.

Prior to any digging, an Excavation Permit will be required. To obtain an excavation permit, contact SGS Mission Support, Excavation Administrator, at 861-4453.

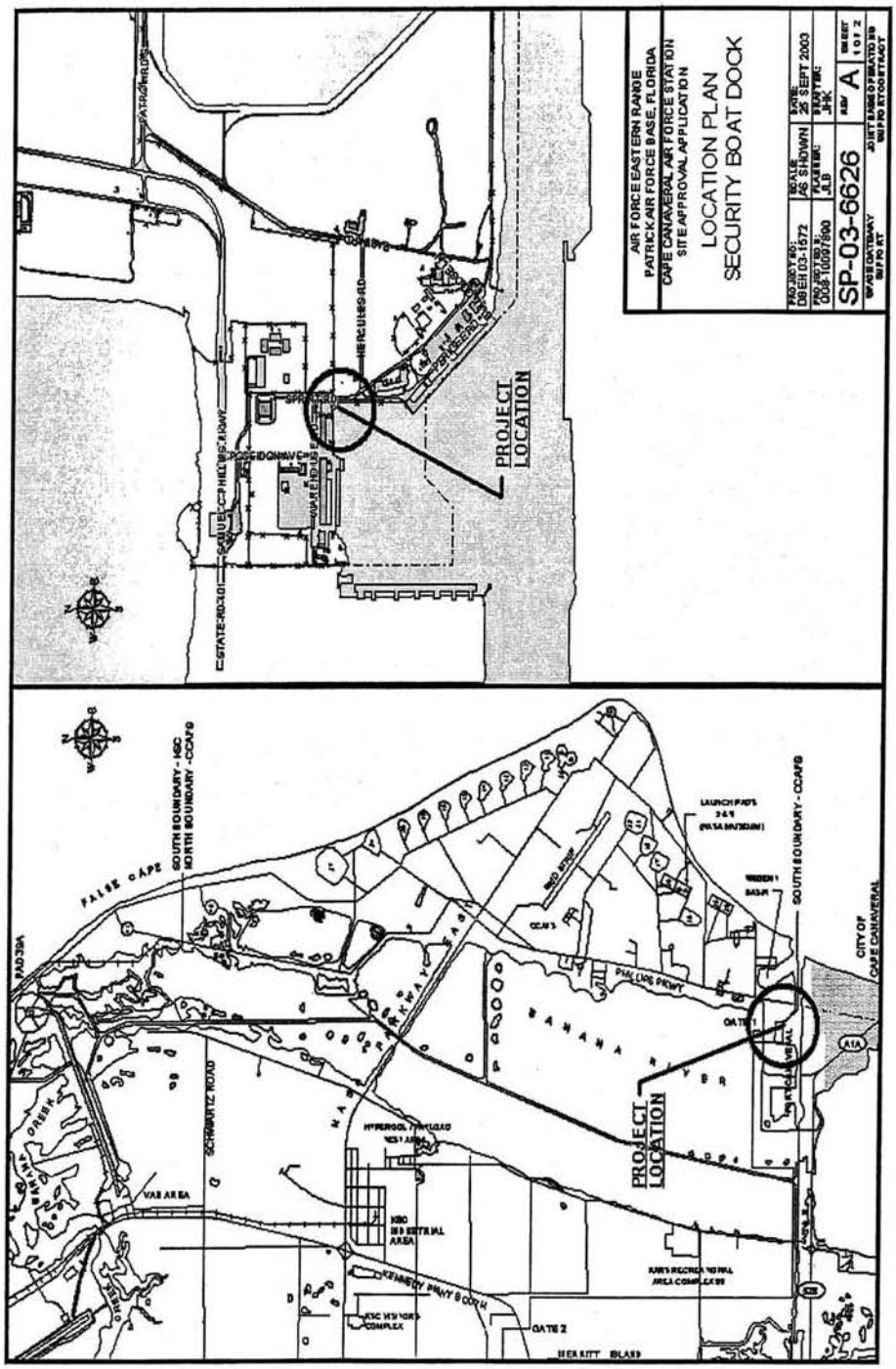
To reduce adverse impacts to threatened and endangered sea turtles from artificial lighting operated on CCAFS, all exterior lighting proposed for this project must be in accordance with the 45th Space Wing Instruction 32-7001, *Exterior Lighting Management*, dated 1 April 03.

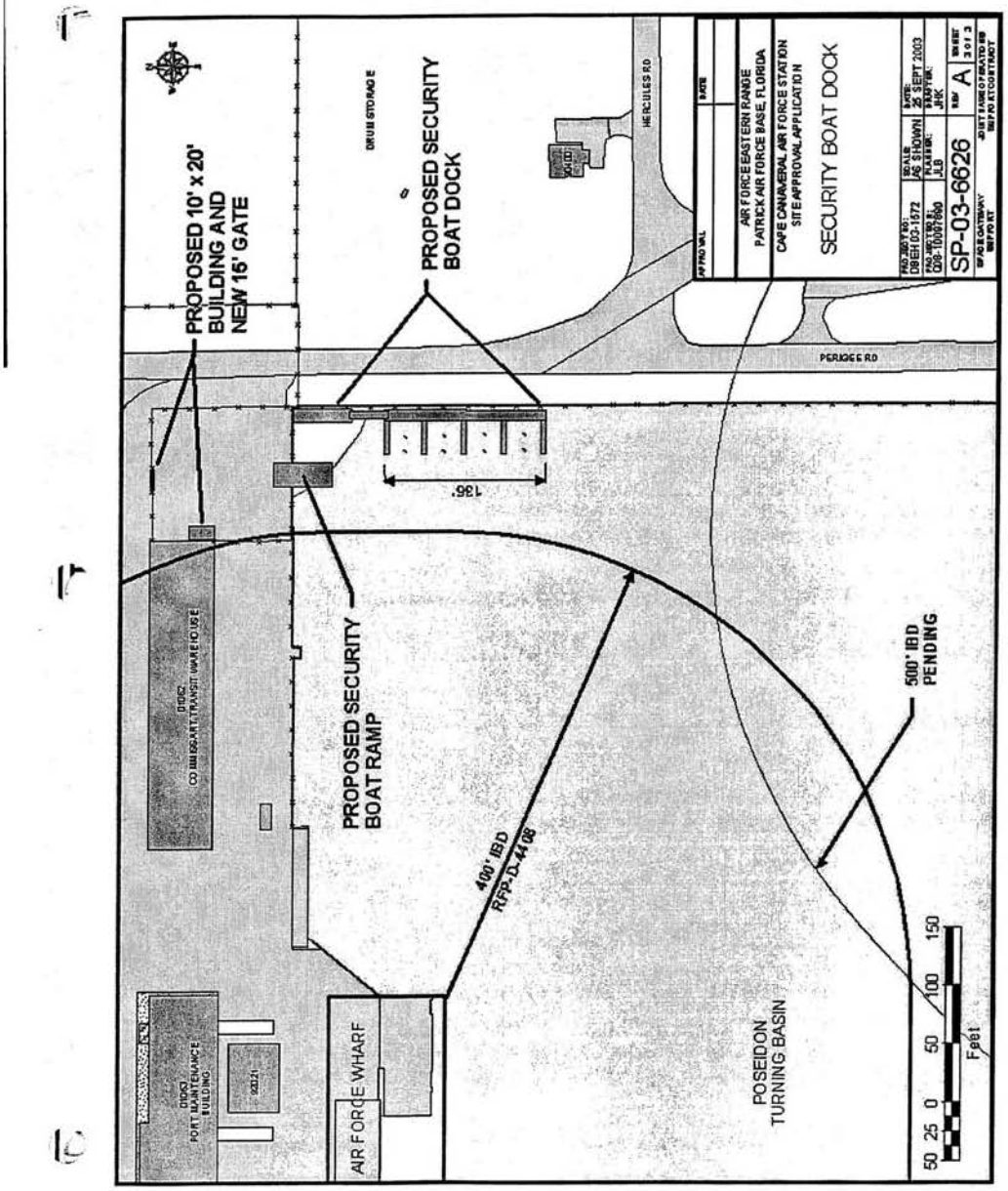
All 45 SW properties are located in areas that are in attainment for all criteria air pollutants; therefore, a conformity determination is not required.

The proposed project has the potential to adversely impact CCAFS environmental attributes and does not qualify for a Categorical Exclusion (CATEX), as defined in 32 CFR 989, Appendix B. Therefore, further environmental analysis is required (e.g., Environmental Assessment or Environmental Impact Statement).

alc
17-May-04

PAGE 3 OF 3 PAGE(S)


AIR FORCE EASTERN RANGE
PATRICK AIR FORCE BASE, FLORIDA
CAPE CANAVERAL AIR FORCE STATION
SITE APPROVAL APPLICATION
LOCATION PLAN
SECURITY BOAT DOCK
SP-03-6626
PROJECT LOCATION
PROJECT LOCATION
FALSE CAPE
SOUTH BOUNDARY - HSC
NORTH BOUNDARY - CCAFB
SOUTH BOUNDARY - CCAFB
BANANA RIVER
PHILLIPS PKWY
KENNEDY PKWY S
SCHURBUTZ ROAD
HERBERT BLVD
CITY OF CAPE CANAVERAL
A1A
GATE 1
GATE 2


PROPOSED 10' x 20'
BUILDING AND
NEW 15' GATE
PROPOSED SECURITY
BOAT DOCK
DRUG STORAGE
HERCULES RD
PERIGEE RD
AIR FORCE EASTERN RANGE
PATRICK AIR FORCE BASE, FLORIDA
CAPE CANAVERAL AIR FORCE STATION
SITE APPROVAL APPLICATION
SECURITY BOAT DOCK
SP-03-6626
136'
PROPOSED SECURITY
BOAT RAMP
400' IBD
RFP-D-44 08
500' IBD
PENDING
AIR FORCE WHARF
POSEIDON
TURNING BASIN
50 25 0 50 100 150
Feet

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APPENDIX B
AGENCY CONSULTATIONS

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Amy

DEPARTMENT OF THE AIR FORCE
45TH SPACE WING (AFSPC)

US FISH & WILDLIFE SERVICE RECEIVED JAN 26

JAN 20 2006

FWS Log No. M1910-2006-I-0269

The proposed action is not likely to adversely affect resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) This finding fulfills the requirements of the Act.

David L. Hankla
Field Supervisor

2/1/2006
Date

MEMORANDUM FOR UNITED STATES DE
U. S. FISH AND WIL
6620 SOUTHPOINT
JACKSONVILLE FL
ATTENTION: ANN M

FROM: 45 CES/CEV
1224 Jupiter Street, MS 9125
Patrick AFB FL 32925-3343

SUBJECT: Informal Section 7 Consultation for Construction and Operation of Two Boat Docks and One Boat Ramp, Cape Canaveral Air Force Station (CCAFS), Florida

1. The 45th Space Wing (45SW) proposes to demolish an existing floating boat dock and gangway on the south side of the wharf at the Trident Basin and replace it with a larger gangway and concrete floating dock. Attachment 1 shows the general location of the replacement as well as a sketch of the proposed design. In addition, the 45SW proposes to construct a new boat ramp on the north end of the Trident Basin, as well as a new six-slip dock just outside the basin. Attachment 1 shows the location of the ramp and Attachment 2 shows the location and general design of the new dock. The new dock outside the basin will include a concrete shelter and access road. Attachment 3 shows the location of both docks and the dock ramp within the Trident Basin.

2. The federally protected West Indian Manatee (*Trichechus manatus*) is known to occasionally utilize the waters of the Trident Basin and three species of sea turtles, the loggerhead (*Caretta caretta*), green (*Chelonia mydas*) and leatherback (*Dermochelys coriacea*), that could be impacted by exterior lighting are known to nest on the adjacent beaches. In addition, the Eastern indigo snake (*Drymarchon corais couperi*) and the Southeastern Beach Mouse (*Peromyscus polionotus niveiventris*) has the potential to be present in the area in which the shelter and access road will be built; however, no indigos have been observed and no beach mouse burrows are currently present in the area.

3. Based on conversations with the Brevard County Natural Resources Office, the port area is exempt from the requirements stipulated in the Brevard County Manatee Protection Plan (see Attachment 4). The 45SW requires concurrence with your office on this statement. To prevent potential impacts to manatees, the construction contractor will be required to survey the work area prior to each workday for the presence of manatees. In addition, the contractor must ensure that appropriate precautions (e.g., speed restrictions, notification of personnel and appropriate work

GUARDIANS OF THE HIGH FRONTIER

practices) are implemented, should any manatees be sighted. Once constructed, manatees are not expected to be negatively impacted since the 45SW already has a no wake requirement in the Basin unless there is a security threat.

4. The only additional lighting proposed for this project would be two low pressure sodium (LPS) fixtures on the new dock and two LPS fixtures on the concrete shelter associated with this dock; therefore, impacts to nesting sea turtles are expected to be negligible.

5. Adverse impacts to indigo snakes are not expected since the area consists of mowed grass only; however, to ensure potential impacts are reduced, the 45SW Indigo Snake Protection/Education Plan will be presented to the project manager and construction manager and personnel. An educational sign will be displayed at the site, informing personnel of the snake's appearance, protected status, and who to contact if any are spotted in the area. Any indigo snakes encountered during clearing activities will be allowed to safely leave the area on their own.

6. Impacts to beach mice are expected to be negligible since no burrows were observed at the site.

7. Based on our review of the project and site visits conducted by 45SW biologists, the AF believes the proposed project is not likely to adversely affect the West Indian manatee, loggerhead, green, and leatherback sea turtles, eastern indigo snake, and southeastern beach mouse

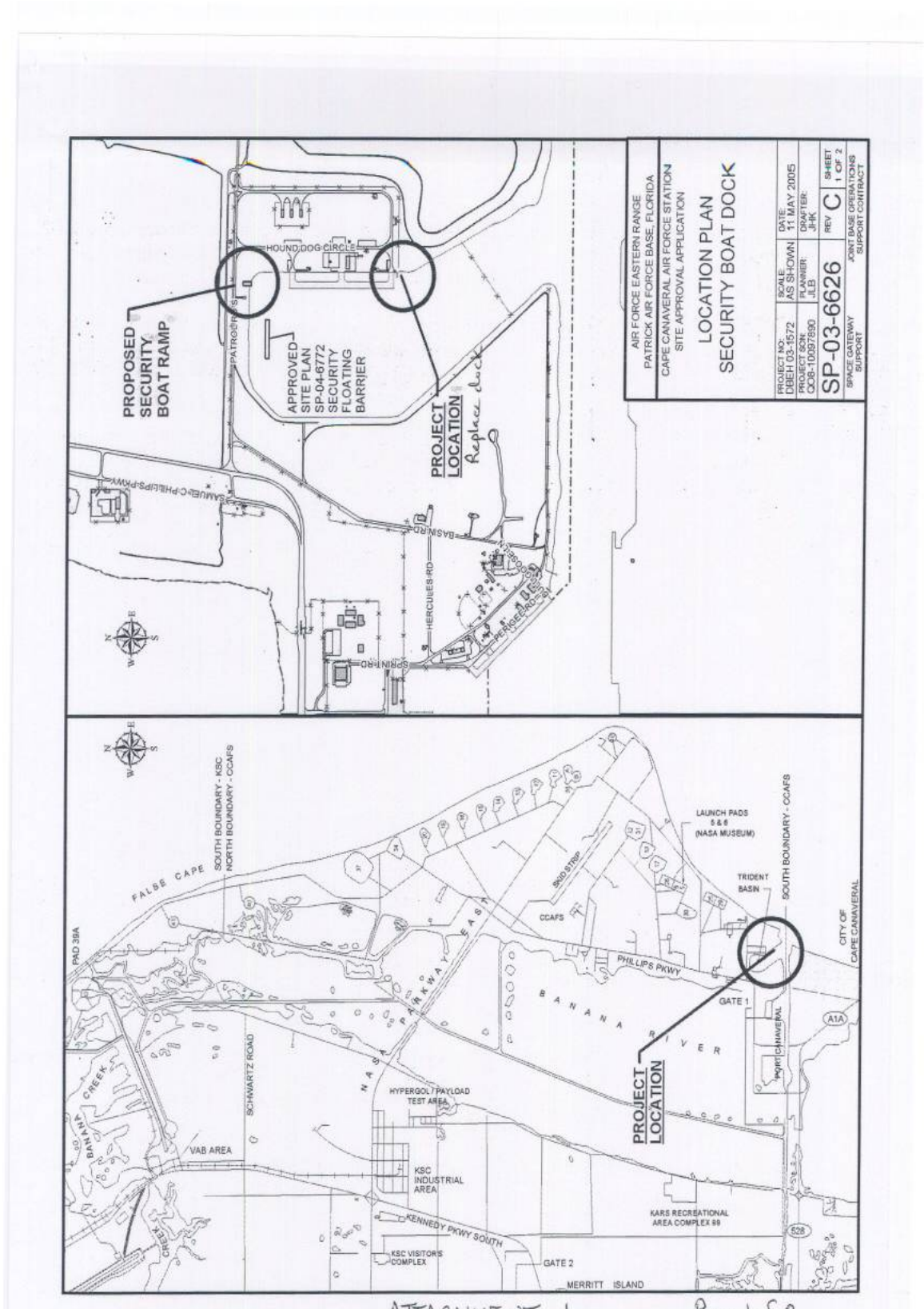
8. Consultation with the National Marine Fisheries Service will be conducted to address potential impacts to sea turtles in the water.

9. Please review the proposed project in accordance with Section 7 of the Endangered Species Act and provide a response to this office at your convenience. POC for this action is Ms Angy Chambers, 45 CES/CEVP, 321-853-6822 or E-mail, angy.chambers@patrick.af.mil.

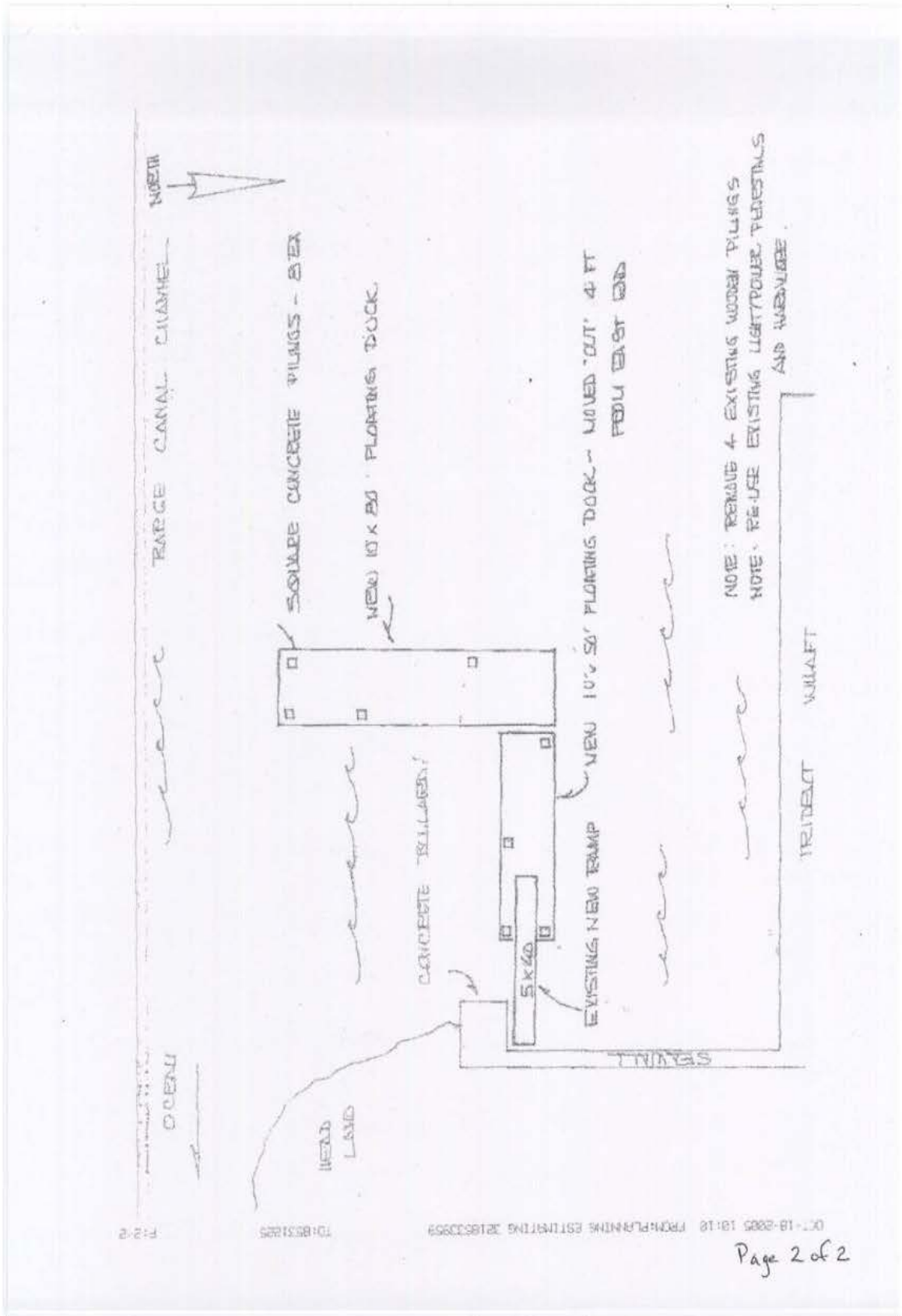
Robin L. Sutherland

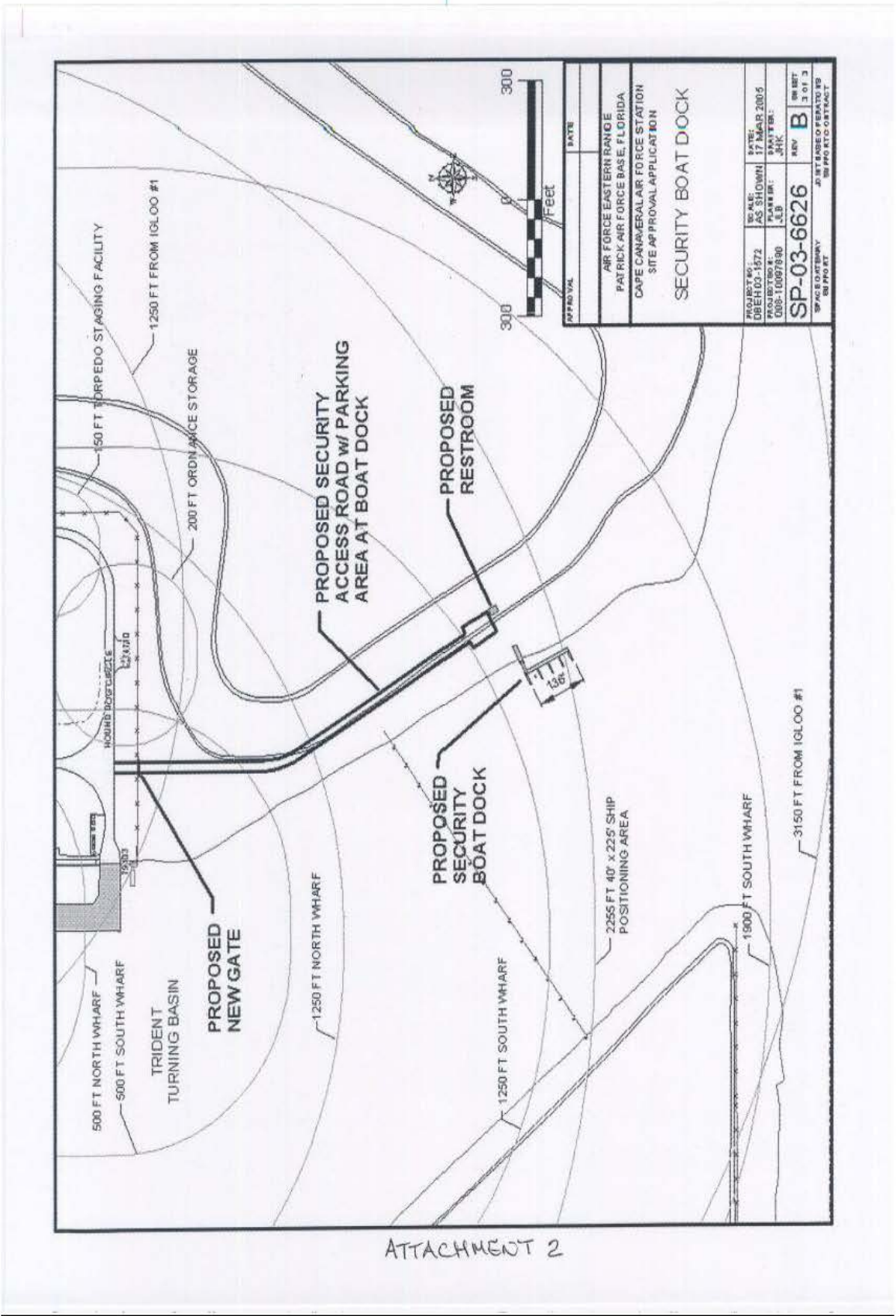
ROBIN L. SUTHERLAND
Chief, Environmental Planning

Attachments:
1. Floating Dock Replacement Drawing and New Ramp Site
2. New Dock Site Plan
3. Location Map for Projects
4. Email from Brevard County Natural Resources Office



ATTACHMENT 1 Page 1 of 2


RANGE CANAL CHANNEL
NORTH
SQUARE CONCRETE PILINGS - 8 EA
NEW) 10 x 80' FLOATING DOCK
CONCRETE BULKHEAD
NEW 10' x 50' FLOATING DOCK -- MOVED 'OUT' 4 FT
FROM EAST END
EXISTING NEW RAMP
5'x40'
NOTE: REMOVE 4 EXISTING WOODEN PILINGS
NOTE: RE-USE EXISTING LIGHT/POWER PEDESTALS
AND WARNING
IRIDIUM WHARF
PINGS
OCEAN
HEAD
LAND
OCT-18-2005 10:18 FROM:PLANNING ESTIMATING 3218533959 TO:8531285 P.12/2
Page 2 of 2



ATTACHMENT 2

Draft Environmental Assessment for
Demolition, Construction, Operation and Maintenance
of Security Boat Docks on Cape Canaveral Air Force Station
And Patrick Air Force Base, FL

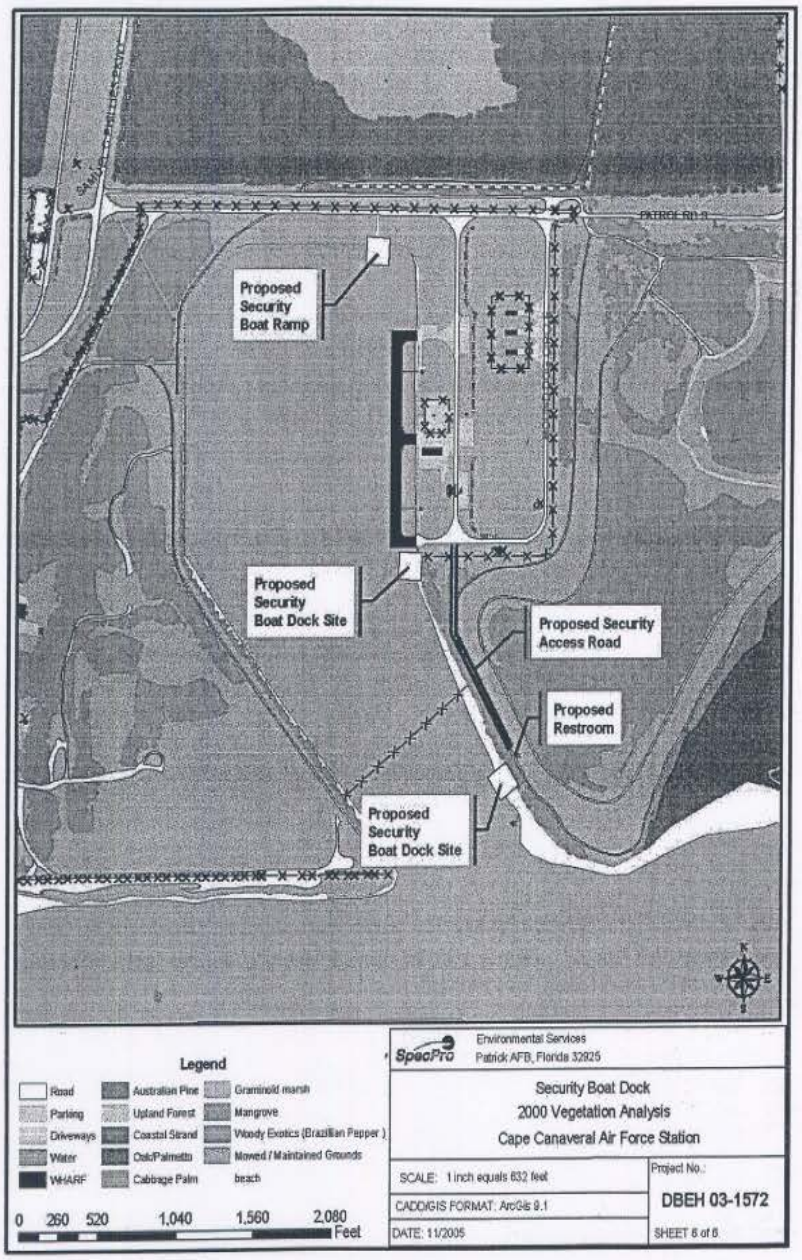


Figure 3-3: Vegetation Communities on CCAFS

ATTACHMENT 3

Page 3-11

Chambers Angy L GS-12 45 CES/CEVP

From: Debbie Coles [debbie.coles@brevardcounty.us]
Sent: Wednesday, May 04, 2005 10:48 AM
To: Chambers Angy L GS-11 45 CE/CEVP
Cc: Paula Berntson
Subject: RE: County Manatee POC

I spoke to Keitha Dattilo-Bain at the 45th Space Wing, Conservation and Planning Office (494-5286), about this project in February. I verified that the project at the Port was not subject to the Manatee Protection Plan's (MPP) boat facility siting standards. Here are the sections that verify this from the MPP:

"Zone C - The Port Canaveral Harbor lying east of the S.R. 401 Bridge."
"Boat Facility Siting Zone C (Port Canaveral Harbor):
In Boat Facility Siting Zone C, there shall be no powerboat-to-shoreline restrictions within the Canaveral Harbor provided current slow speed regulations remain in effect."
"10. In Boat Facility Siting Zone C (Port Canaveral Harbor), the siting of new or expansion of existing boat ramps shall be unrestricted."

I hope this is the answer you were looking for. Contact me if you have any more questions.

Regards,

Debbie Coles
Special Projects Coordinator IV
Brevard County Natural Resources Management Office
2725 Judge Fran Jamieson Way
Viera, Florida 32940
(321) 633-2016
Fax (321) 633-2029
mailto:debbie.coles@brevardcounty.us

-----Original Message-----
From: Paula Berntson@BCC@Viera
Sent: Wednesday, May 04, 2005 8:20 AM
To: Debbie Coles@BCC@Viera
Subject: FW: County Manatee POC

-----Original Message-----
From: Chambers Angy L GS-11 45 CE/CEVP [mailto:Angy.Chambers@patrick.af.mil]
Sent: Tuesday, May 03, 2005 1:08 PM
Subject: County Manatee POC

I've been trying to call you for a few weeks and have been unsuccessful. I'm looking for an answer on whether the Port Canaveral area is exempt from the requirements of the Manatee Protection Plan. Specifically, would the Air Force building a dock at one of their wharfs require that a seagrass survey be done and all of the other questions be asked that are listed in the Plan. We had heard the Port was exempt but I wanted to check before I send in a consultation package to the U.S. Fish and Wildlife Service. I read the plan and it just wasn't that clear to me. If you could call or email me back, I'd really appreciate it.

Angy L. Chambers
Environmental Planning and Conservation
45 CES/CEVP
Phone 853-6822
Fax 853-6517

ATTACHMENT 4

1

FROM : FAX NO. :7278245309 Apr. 12 2006 10:26AM P1

R10

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701
(727) 824-5301, FAX 824-5300
http://sero.nmfs.noaa.gov

MAR 30 2006

F/SER31:MCB

Ms. Angy Chambers
Office of Environmental Planning
45th Space Wing (AFSPC)
Department of the Air Force
1224 Jupiter Street, MS 9125
Patrick AFB, FL 32925

Dear Ms. Chambers:

This is in response to your letter received by the National Marine Fisheries Service (NMFS) on February 6, 2006, submitted pursuant to section 7 of the Endangered Species Act (ESA), regarding the proposed construction of two boat docks and one boat ramp at Cape Canaveral Air Force Station. In your letter, you determined the project is not likely to adversely affect loggerhead (*Caretta caretta*) or green (*Chelonia mydas*) sea turtles. You requested our concurrence with your findings. NMFS requested additional information on March 17, which was provided by you on March 20.

The project is located in Trident Basin, within Port Canaveral, Brevard County, Florida. Trident Basin is an approximately 40-foot deep dredged basin. The project includes the demolition of an existing floating dock and gangway, which will be replaced with a larger gangway and floating concrete dock. Additionally, the 45th Space Wing proposes to construct a new boat ramp and six-slip dock within the basin. Replacement of the existing dock and construction of the new dock would entail a combination of land-based equipment and a small barge. Construction of the new boat ramp will be strictly land based. Precautions to be employed during the project include surveying project area prior to starting each day, removing all work-related material from the water to prevent entanglement, and stopping work if turtles are observed within the project boundaries.

Listed species under the purview of NMFS protected by the ESA and which are considered under this ESA section 7 consultation include the green (*Chelonia mydas*), loggerhead (*Caretta caretta*), Kemp's ridley (*Lepidochelys kempii*), leatherback (*Dermochelys coriacea*), and hawksbill (*Eretmochelys imbricata*) sea turtles; and the smalltooth sawfish (*Pristis pectinata*). The smalltooth sawfish is very rare in the area and is unlikely to occur at the project site. The project area is not in critical habitat for any of these listed species; therefore, critical habitat will not be affected.

We believe the project is not likely to adversely affect ESA-listed sea turtles. Green sea turtles in particular may occasionally be present in the turning basin where they graze on the algae and other epibionts growing on the existing docks and rock rip-rap that surround the inside of the basin. There is no other food source within the basin (e.g., sea grass). The area for the ramp is the only foraging area that would be impacted and this would be an area approximately 20 feet in length. Due to the proposed precautions that will be implemented during the project, it is discountable that construction activities will directly impact any sea turtles. Furthermore, there is a status-quo no-wake requirement within the basin. The elimination of a 20-foot long forage area due to the construction of the boat ramp is considered insignificant considering the remaining amount of forage area within this man-made basin.

In summary, based on the project description, NMFS has determined that the proposed activity is not likely to adversely affect any ESA-listed species under our purview. This concludes your consultation responsibilities under section 7 of the ESA for species under NMFS' purview. Consultation must be reinitiated if a take occurs or new information reveals effects of the action not previously considered, or the identified action is subsequently modified in a manner that causes an effect to listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action. We have enclosed other statutory requirements that may apply to this action as well as additional information on NMFS' new mechanism to allow you to track the status of this and other ESA consultations. If you have any questions about this ESA consultation, please contact Michael Barnette, natural resource specialist, at (727) 551-5794 or by e-mail at michael.barnette@noaa.gov.

Sincerely,

Roy E. Crabtree, Ph.D.
Regional Administrator

Enclosure

Ref: I/SER/2006/00390
File: 1514-22.S.USAF

Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Colleen M. Castille
Secretary

August 4, 2006

Ms. Angy L. Chambers
Department of the Air Force
45 CES/CEVP
1224 Jupiter Street, MS 9125
Patrick AFB, FL 32925-3343

RE: Department of the Air Force – Draft Environmental Assessment for the Demolition, Construction, Operation, and Maintenance of New Boat Docks, Boat Ramp, and Support Facility at Cape Canaveral Air Force Station – Brevard County, Florida
SAI # FL200606082402C

Dear Ms. Chambers:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the referenced Draft Environmental Assessment (EA).

The St. Johns River Water Management District (SJRWMD) states that an Environmental Resource Permit (ERP) will be required for the proposed project. Issues that should be considered in the design and permitting of this project include: water quality, resources, and wildlife. Water quality considerations would consist of the method of construction (driving pilings is preferable to jetting), type of construction materials utilized (use of inert materials such as concrete, PVC lined wood, plastic, and heartwood instead of pressure treated wood), and use of adequate turbidity controls during construction. In addition, stormwater treatment will be needed for the proposed access road. Due to water depths within the basin, the SJRWMD states that it is unlikely that there are significant resource concerns. Wildlife issues are expected to focus on manatee protection. The SJRWMD notes that it will request comments from the Florida Fish and Wildlife Conservation Commission to assess and address these concerns. The applicant will be required to demonstrate during the permit application review process that any direct and secondary impacts to wetlands and wildlife have been avoided or minimized. Unavoidable impacts will require mitigation in accordance with the Unified Mitigation Assessment Method found in Chapter 62-345, *Florida Administrative Code*. Compliance with the environmental review criteria in Chapter 12 of the SJRWMD Applicant's Handbook will also be required. Please also note that all required ERP permits

must be issued prior to the initiation of construction activities within the project area. Please contact Ms. Susan Moor, Supervising Regulatory Scientist, in the Palm Bay Service Center at (321) 676-6626 or smoor@sjrwmd.com for further information and assistance.

Based on the information contained in the Draft EA and the enclosed state agency comments, the state has determined that, at this stage, the proposed activity is consistent with the Florida Coastal Management Program (FCMP). The agency must, however, address the concerns identified by SJRWMD staff prior to project implementation. The state's continued concurrence with the project will be based, in part, on the adequate resolution of any issues identified during this and subsequent reviews. The state's final concurrence of the project's consistency with the FCMP will be determined during the environmental permitting stage.

Thank you for the opportunity to review the proposed project. Should you have any questions regarding this letter, please contact Ms. Suzanne E. Ray at (850) 245-2172.

Yours sincerely,

Sally B. Mann

Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/ser
Enclosures

cc: Geoffrey Sample, SJRWMD

Florida
Department of Environmental Protection
"More Protection, Less Process"

Categories

DEP Home | OIP Home | Contact DEP | Search | DEP Site Map

Project Information	
Project:	FL200606082402C
Comments Due:	07/10/2006
Letter Due:	08/05/2006
Description:	DEPARTMENT OF THE AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT FOR THE DEMOLITION, CONSTRUCTION, OPERATION, AND MAINTENANCE OF NEW BOAT DOCKS, BOAT RAMP, AND SUPPORT FACILITY AT CAPE CANAVERAL AIR FORCE STATION - BREVARD COUNTY, FLORIDA.
Keywords:	USAF - BOAT DOCKS, BOAT RAMP, AND SUPPORT FACILITY - CAPE CANAVERAL, BREVARD CO.
CFDA #:	12.200

Agency Comments:
E. CENTRAL FL RPC - EAST CENTRAL FLORIDA REGIONAL PLANNING COUNCIL
The proposed project, as presented for review and when considered in its entirety, is consistent with the adopted Goals, Policies and Objectives of the East Central Florida Regional Planning Council.
BREVARD -
COMMUNITY AFFAIRS - FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS
FISH and WILDLIFE COMMISSION - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
NO TIME FOR REVIEW BY MARY DUNCAN ON 6/26/06.
STATE - FLORIDA DEPARTMENT OF STATE
No Comments
ENVIRONMENTAL PROTECTION - FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
No comments.
ST. JOHNS RIVER WMD - ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
The proposal is to replace the existing boat dock and construct a boat ramp inside the Trident Basin, construct a new boat dock and concrete shelter building just outside the Trident Basin, and construct an adjacent access road and restroom. An Environmental Resource Permit (ERP) will be required for this work. Issues that should be considered in the design and permitting include water quality, resources, and wildlife. Water quality considerations consist of method of construction (driving pilings is preferable to jetting), construction materials (use of inert materials such as concrete, PVC lined wood, plastic, and heartwood instead of pressure treated wood), and adequate turbidity controls during construction. In addition, stormwater treatment will be needed for the proposed access road. Due to water depths within the basin it is unlikely that there are significant resource concerns. Wildlife issues are expected to focus on manatee protection. The District will request comments from the Florida Fish and Wildlife Conservation Commission to assess and address these concerns. The applicant would be required to demonstrate during the permit application review process that any direct and secondary impacts to wetlands and wildlife have been avoided or minimized. Unavoidable impacts would require mitigation in accordance with the Unified Mitigation Assessment Method found in Chapter 62-345, F.A.C., and compliance with the environmental review criteria in Chapter 12 of the Applicant¿s Handbook would also be required. Please also note all required ERP permits must be issued prior to any clearing or other construction activities within a project area. Please contact Susan Moor, Supervising Regulatory Scientist, in the Palm Bay Service Center at (321) 676-6626 or smoor@sjrwmd.com if there are any questions.

For more information please contact the Clearinghouse Office at:

3900 COMMONWEALTH BOULEVARD MS-47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161

SR

COUNTY: BREVARD

RECEIVED BUREAU OF HISTORIC PRESERVATION 106-2006-4-USAF-SCH
2006 JUN 12 P 4:08

DATE: 6/6/2006
COMMENTS DUE DATE: 7/10/2006
CLEARANCE DUE DATE: 8/5/2006
SAI#: FL200606082402C

MESSAGE:

2006-05539

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNIT	RPCS & LOC GOVS
COMMUNITY AFFAIRS	ST. JOHNS RIVER WMD		
ENVIRONMENTAL PROTECTION			
FISH and WILDLIFE COMMISSION			
X STATE			

RECEIVED BUREAU OF HISTORIC PRESERVATION 2006 JUN 12 A 10:57

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

_ Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.

X Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.

_ Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.

_ Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

DEPARTMENT OF THE AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT FOR THE DEMOLITION, CONSTRUCTION, OPERATION, AND MAINTENANCE OF NEW BOAT DOCKS, BOAT RAMP, AND SUPPORT FACILITY AT CAPE CANAVERAL AIR FORCE STATION - BREVARD COUNTY, FLORIDA.

To: Florida State Clearinghouse

AGENCY CONTACT AND COORDINATOR (SCH)
3900 COMMONWEALTH BOULEVARD MS-47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

EO. 12372/NEPA
☑ No Comment
☐ Comment Attached
☐ Not Applicable

Federal Consistency
☑ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

Division of Historical Resources
Bureau of Historic Preservation

From:

Division/Bureau:

Reviewer: James E. Joner Laura A. Kammerer, Deputy SHPO

Date: 7/25/06 7.25.2006

RECEIVED
JUL 27 2006
OIP / OLGA

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5511
(727) 824-5317; FAX (727) 824-5300
http://sero.nmfs.noaa.gov/

August 16, 2006 F/SER4:GG/pw

Ms. Angy Chambers
Patrick Air Force Base, Environmental Planning
45 CES/CEVP
1224 Jupiter St. MS 9125
Patrick AFB, Florida 32925-3343

Dear Ms. Chambers:

NOAA's National Marine Fisheries Service (NMFS) has reviewed your memorandum, which we received July 17, 2006, requesting an essential fish habitat (EFH) consultation for the demolition of an existing floating dock and gangway and the construction and operation of two floating concrete docks and a boat ramp at Cape Canaveral Air Force Station in Port Canaveral, Brevard County, Florida. The work would occur within the Trident Basin adjacent to the Trident Wharf, and the new dock would be linked to an existing seawall. The purpose of the project is to provide dockage for security boats.

Based on the information provided, we anticipate that adverse effects on fishery resources under our purview would be minimal. Consequently, we do not object to the project as proposed.

These comments do not satisfy your consultation responsibilities under section 7 of the Endangered Species Act of 1973, as amended. If any activities may affect listed species and habitats under NMFS purview, consultation should be initiated with our Protected Resources Division at the letterhead address.

Please direct related questions or comments to the attention of Mr. George Getsinger, at our Northeast Florida Field Office. He may be reached at 9741 Ocean Shore Drive, St. Augustine, Florida 32080, or by telephone at (904) 461-8674.

Sincerely,

/ for

Miles M. Croom
Assistant Regional Administrator
Habitat Conservation Division

cc: (via electronic mail)
F/SER4
F/SER47-Getsinger